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ABSTRACT

A distance education taskforce was convened by the Colorado Commission on Higher Education (CCHE) in the spring of 2000 and was charged to address the potential for increased use of distance education to meet the needs of populations throughout the state. It was specifically charged to address the conceptions of a common platform and common core of courses. Thirty-three Colorado higher education representatives participated, drawn broadly from faculty and administrative positions in academic affairs, finance, and technology. The taskforce formed sub-taskforces in six areas: market study, academic, common platform, common course catalog, organization, and finance. Each sub-taskforce prepared a written report outlining a number of recommendations and funding implications. In total, 32 recommendations were prepared spanning six areas of concern. This report compiles the recommendations and adds CCHE's position and recommendation for proposed action with regard to each. (EV)

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TITLE

Colorado Commission on Higher Education (CCHE)
November 2, 2000
Agenda Item VII, D
Attachment

[Distance Educatio

SUMMARY AND RE

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SUMMARY AND REC

Background

A distance education taskforce was convened by CCHE in the spring of education to meet the needs of populations throughout the state. It was s and common core of courses. Thirty-three Colorado higher education repre positions in academic affairs, finance, and technology. The taskforce fo platform, common course catalog, organization and finance. Each recommendations and funding implications. In total, 32 recommendation recommendations and added CCHE's position and recommendation for pr

Guiding Principles

The taskforces agreed that recommendations would be consistent with fou

1. Growth and coordination of distance education programs should be b build synergistically on existing institutional strengths.
2. An institution's role and mission, academic standards, and commitme delivery.
3. Information technology competency is desired of all faculty and stude
4. Distance education transcends location.

Key Recommendations

The following table summarizes each of the 32 recommendations – inc CCHE staff generally agree with the recommendations as presented. H

Distance Education Coordinating Council

The taskforce recommendation that a formal body be established to car Termed the Distance Education Coordinating Council (DECC), it wou

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OMMENDATIONS

2000, charged to address the potential for increased use of distance pecifically charged to address the conceptions of a common platform esentatives participated, drawn broadly from faculty and administrative ormed sub-taskforces in six areas: market study, academic, common sub-taskforce prepared a written report outlining a number of ns were prepared spanning six areas of concern. Staff compiled these oposed action with regard to each.

r guiding principles:

ased on incentives that encourage collaboration, cooperation, and

ent program assessment are independent of mode of instructional

ents in recognition of its cultural and economic importance.

cluding CCHE's position statement and proposal for action on each. lowever, there are implementation issues with which staff disagree.

ry out and implement the various recommendations is one such area. ld have as its mission: to increase awareness, expand access, assure

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quality, and improve cost-effectiveness of certificate and degree progr
higher education through statewide coordination of resources and servic
Both staff and the taskforce agree the DECC should be comprised of
working taskforces in each area of concern, and advise and consult
taskforce recommendation that the coordinating council needs a
implementation of a common course catalog and platform, inter-inst
advocacy, market research, administration of program development gran

It was recommended that the CCHE Commission should pass a policy
CEOs, formally establishing the DECC, including membership criter
recommendation in part. Staff believes employees of the coordinating e
result in effective implementation of the proposed recommendations. Sta

Central Program Development Fund

A second major recommendation, as presented by the Academic Task
CCHE Programs of Excellence to maximize the potential for the devel
provide an incentive to develop specific programs that serve priority ec
access to higher education for all Colorado residents through an online c
the Commission should note that the Financial Taskforce recommended

This Central Development Fund is seen as the mechanism to achieve a
institutions. These outcomes are best summarized by a set of prog
Organizational Taskforce, namely, that any funded proposal:

1. Constitutes an entire degree, certificate, or general education progra
2. Provides for faculty training and support
3. Includes quality assurance and control mechanisms
4. Presents reasonable and definite milestones, timelines, and delivera
5. Complies with adopted technical standards and systems
6. Intellectual property goes to institution in accordance with its own
7. Fills a gap in existing program offerings from a statewide perspecti
8. Eliminates or consolidates program duplication
9. Addresses workforce needs of Colorado
10. Addresses a sizeable student market
11. Broadens access to rural populations
12. Has multi-institutional participation (course development and/or de

ams offered via distance education by Colorado public institutions of
s to competitively serve the needs of Colorado's citizens and economy.
epresentatives from each higher education system, be supported with
ith existing CCHE councils. However, staff does not agree with the
eparate, independent staff to coordinate the following functions:
utional coordination of credit transfer and tuition payments, student
s, quality assurance and standards, and data collection and reporting.

esolution, jointly developed with the institutions and supported by the
a, charter, staffing, and funding guidelines. CCHE concurs with this
tity proposed would serve to many masters with competing interests to
ff believes implementation staff should be employed by CCHE directly.

force, proposes a centralized funding source similar to the successful
opment of new online courses and programs. The purpose would be to
nomic development goals, and to maximize the potential for statewide
elivery mode. CCHE strongly endorses this recommendation. However,
against this strategy.

number of outcomes in distance education of interest to CCHE and the
ram selection criteria for the use of these funds developed by the

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13. Explores cost-effective uses of technology
14. Explores innovative and appropriate uses of technology
15. Showcases competitive academic competency to global markets
16. Enhances on-campus technology-enhanced delivery of program
17. Involves 2-year to 4-year program articulation

State Portal Project

These key recommendations – and the many they support –entail sub
approach to initially meet these funding needs is through the State Po
relevance and potential of distance education as a valuable and usefu

Planned Initiatives Short Term

Several recommendations can be implemented in the short run, speci

- The establishment of a statewide distance education course cata
and CCHE.
- The issuance of several requests for proposal (RFPs) for specifi
including, Web authoring tools, Course Management Systems a
that these awards be permissive.
- The establishment of the DECC and its staffing with a 1.0 FTE
established.
- Continued data tracking providing a statistical profile of distanc

Common Platform

A requirement of this report was to address the issue of a *commo*
Taskforce. The principal finding calls for collaboration among all pu
a variety of technologies and services comprising distance educatio
these services be elective due to two compelling concerns: first, a su
and second, the industry is in great flux, requiring flexibility in co
wane. In order to work toward greater common use of a single platfo
the Commission to require, as a term and condition of

Common Core

stantial financial commitment. CCHE management has determined the best
rtal Project. This approach is welcomed by the portal project because of the
l online service to Colorado citizens.

fically:

log. This would be implemented through joint funding from the institutions

c technology elements of a common platform for distance education,
nd Turn-Key Services. The taskforce was unanimous in its strong position

position jointly funded by the institutions, if a central development fund is

e education activity in Colorado.

platform. This issue was addressed thoroughly by the Common Platform
blic higher education institutions in issuing RFPs and awarding contracts for
n platforms. The taskforce is unequivocal in recommending that purchase of
bstantial existing "legacy" commitment exists to a broad variety of platforms
ntractual arrangements as companies' positions in the marketplace wax and
rm, however, the development fund may, as appropriate, be implemented by
funding, the use of a specific and standard platform technology.

Another requirement of this report was to address the issue of developin education content among many institutions, each of which then would us This issue was first addressed by clarifying terminology and the taskforce confused with the same term meaning, in the context of general educatio has more to do with *how we share development costs* than with the spec principally, through the central development fund recommendation, v development costs.

Intellectual Property

Intellectual property policy was addressed in several recommendations. T which provides for fair participation among all parties, including facult proposes the Commission adopt a motion to set a date certain by whic Commission.

CCHE DISTANCE EDUCATION TASKFORCE RECOMMEN

Rec. No.	Page No.	Taskforce Recommendation Summary	CCHE Positio
MARKET STUDY TASKFORCE RECOMMENDATION			
M.1	9	The CCHE should assign a high priority to the conduct of a professional market study of the Colorado distance learning market. A comprehensive analysis of the statewide market will provide the foundation for CCHE's distance education initiative, should guide program investments, and should provide direction on needed "marketing" efforts by the state and institutions. The statewide study should take precedence, in terms of timing and resources, over efforts to analyze Colorado's potential to compete nationally and globally in the distance learning business. Finally, the proposed Distance Education Coordinating Council (DECC) [see Recommendation O.1] should develop mechanisms for ongoing analyses of the	Partially agre with the task, the funding See Proposed

g a *common core* – sharing the costs in the development of distance this content in delivering their version of a given course or program. ecommended dropping the use of this term entirely because it is easily n, the general education curriculum. The *core* concept in this context fic content involved. Therefore, the intent of this requirement is met, hich provides both an incentive and a means for sharing course

ie point is that adequate IP policy should be in place at each institution y, in IP revenue. Staff strongly endorses these recommendations and h all institutions shall have such a policy in place and filed with the

DATION SUMMARY

Σ n	**Proposed Action**
e. Agree but not strategy. Action.	CCHE's position is that the institutions, acting collectively, should finance this market study. Market intelligence is a central responsibility of each institution. A cooperative effort resolves the issue of each institution spending resources essentially re-

changing marketplace within Colorado, nationally and internationally.

ACADEMIC TASKFORCE RECOMMENDATIONS

A.1	12	Endorse the use of the *Guiding Principles for Distance Learning in a Learning Society*, first developed by the *American Council on Education* in 1996.	Agree. The national professional guidelines adopted by the institutio should be when the fo national ac guidelines fo distance edu released.
A.2	14	*Common core*. To avoid confusion with existing terms used in Colorado higher education to refer to the general education curriculum, the committee recommends that the existing pool of online courses that will form the base of the coordinated online course initiative be referred to as the *Online Course Data Base*.	Agree in should avoi of the term *core* because already has meaning in to the genera education c We would d however, *institutional* the totality education developed independentl institutions in 1999 to b approximate with *coordi courses*, dist education jointly devel

doing research that benefits all.

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should adopt a
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			among a set o institutions.
A.3	15	*Content development:* 1) Faculty should be encouraged to bring forward creative ideas for new online courses that address not only content; but also creative ways to use the technology associated with online course delivery. 2) New online courses should address the needs of the specific communities each public colleges serves. The academic marketplace will be one of the best ways to determine which courses should be offered online. 3) The quality of new online courses developed by public colleges should not be compromised in order to respond to unsubstantiated market forces. 4) Institutions should be free to develop and offer online courses that are not included in the "online course data base."	1) Agree. Fa institutional in distance should be s 2) Agree. Ma relevance is a responsibility distance program dev whether throu decentralized centralized 3) Agree. 4) Agree; se

culty and No action needed.
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See A.1.

e note 1.

A.4	15	*Intellectual property policy.* Systems that have intellectual property (IP) policies should continue to develop online programs within the parameters of those policies. As soon as possible, the CCHE should develop an IP policy addressing the development of online courses programs for use by those institutions that do not have an IP policy	Agree in pa should est deadline for institutions to evelop IP Policies shou directly addr copyright of education or programs developed wi centralized an appropriat revenue shari arrangement incorporated terms and of the de contract.
A.5	15	*Course transferability.* For each course listed in the statewide online catalogue, provide direction on the transferability of that course to other Colorado public colleges. A taskforce to work on this project should include curriculum officers, transfer officials and registrars. In addition existing Transfer Policy should be reviewed and modified to accommodate the growing tendency of students to use the online mode to build a class schedule which thereby increases course transfer traffic. The ability of students to electronically reach out for a course while remaining at their home institution suggests a new way of viewing course transfer. This new reality will also require that admission policies be modified to accommodate this academic phenomenon.	Agree. Staff as extremely way to facili completion b students, students to needed cour from a broad state institu the needed not available convenient their home

rt. CCHE ablish a policies. ld ess distance material th funding, e IP ng will be in the conditions velopment	CHE ommission should adopt a motion requiring institutions to adopt and file with CCHE an IP policy that covers copyright issues by a date certain.
views this important ate degree y enabling enroll for ses online choice of ion when course is or through institution.	-DECC, with State Portal funding, should implement a transferability database as a component of the State distance education portal. -Academic Council should reevaluate transferability and admissions policy in light of distance education trends.

A.6	15	*Coordination.* Organize a distance education consortium with support and guidance from the CCHE to develop Colorado's distance education initiative. The consortium should have standing councils which deal with Academic, Common Course Catalogue, Technology Support Systems, Finances and Market Strategies. In its early stages, the consortium would leverage the experience, momentum and common understandings already achieved by the six working CCHE Distance Education Taskforces which produced this report.	Agree. Note the other recommendat (e.g., M.1, A.12, P.1 O.1, F.4) eith reference or this particula recommenda
		Referring only to the academic responsibilities of a consortium, a council could be established which includes academic administrators, practicing online faculty members, extended studies officers and instructional designers who would apply established CCHE academic policies to the review and approval of new online courses/programs. Specific academic issues that emerged from the coordinated online initiative would be referred to existing administrative units or committees for resolution and/or policy recommendation.	Disagree. Sta not recomme another degr approval mec Staff believe existing degr approval mec at the institut at CCHE are appropriate a sufficient rev processes for purposes of approval. Th degree appro processes ap distant and o programs sh reviewed un uniform acad processes. T recommenda consistent w second guidi

many of See O.1

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			principle th adopted.
A.7	16	*Academic support services.* The development of new online courses should include appropriate academic support services to ensure student persistence and retention in online courses.	Agree. Cost academic su services factored int models o education c delivery.
A.8	16	*Tuition rates.* If a common online tuition rate is established, that rate should not place any students, who are currently able to take online courses from public institutions, at an economic disadvantage. Tuition rates should be established with the primary focus on Colorado residents and secondarily on the out-of-state academic marketplace.	Partially ag common o rate shoul established principle th tuition ra role and r other differences staff believ differential within an i not accep F.1.
A.9	16	*Needs assessment.* Conduct either a statewide or selectively focused "needs assessment" that tests the potential for: online course demand in content areas that respond to workforce development, regional and community educational needs and appropriate technology required for online courses. Potential demand should also measured against the increasing number of	Agree.

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-The Commission should pass a motion tasking the CIO and CFO Councils to work jointly to develop adequate cost models and cost accounting mechanisms for distance education.

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table. See

The Commission should set a policy that online tuition should be no higher than regular tuition and asking that the governing boards revise their practices to come into compliance with this policy.

See M.1.

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		measured against the increasing number of providers.	
A.10	16	*Program development criteria. Criteria should be considered when new courses are being developed, including: program/course demand, similar or duplicate courses, an assessment process, and highly evolved interactive design.*	Agree. Thes apply equall the course is developed th institution's resources or centralized development See Orga Taskforce ch a detailed list candidate
A.11	16	*Program development incentives and support.* For faculty members who are encouraged to develop online program/courses, incentive options should include reassigned time for course development, extensive and *continuing* faculty development, monetary incentives, and assistance from instructional designers. In cases when faculty develop unique courseware, software or any marketable online enhancement, there should be opportunities for faculty to share revenues.	Agree. Incent should be commensurat additional Support sh provided a to the task course dev IP policy sho accordance w
A.12	17	*Centralized development funding.* A centralized funding source similar to the successful *CCHE Programs of Excellence* is recommended to maximize the potential for the development of new online courses and programs within Colorado public higher education, to provide an incentive to develop specific programs that serve	Agree. Note recommenda opposed by F CCHE shoul establish a maintain t through a mechanism

e criteria v whether rough an wn through a fund. nizational apter for of criteria.	DECC should establish program selection criteria for centralized development funding.
ives e with workload. ould be ppropriate of online elopment. ould be in ith A.4.	-Initially, DECC should fund incentives and support as component of central development fund grants. -CIOs should develop a comprehensive technology budget model sufficient to meet these and similar technology needs.
his tion is .4. d means to is fund suitable (student	-Centralized funding should be capitalized through State Portal project and administered through DECC

develop specific programs that serve institutional priority economic development goals, and to maximize the potential for statewide access to higher education for all Colorado residents through an online delivery mode.

fee, different tuition, or state FTE

COMMON PLATFORM TASKFORCE RECOMMENDATIONS

P.1 25 *Course development tools:* Agree.

a) Establish a permissive state purchasing price agreement with authoring software vendors.

b) Provide a financial incentive in the form of a subsidy by funding a significant fraction of the cost of the software purchased through the price agreement.

c) Provide necessary funding for institutional support staff, create statewide training programs and user forums for the selected authoring tools, sponsor a semiannual Web Authoring user group conference.

d) Create an incentive process for the development and operation of an online repository for digital content, modules, graphic and visual elements, and audio components.

P.2 26 *Course Management Systems (CMS):* Agree.

a) A single CMS for all public institutions should not be mandated in view of the diversity of higher education in Colorado and the subsequent variety in administrative

al
ifferential -CCHE
support). Commission should establish a policy on continuation funding.

-DECC should be tasked to develop a permissive State RFP for course development tools.

-The financial incentive to use the State award should be implemented as a condition of funding from the central development pool.

-DECC should be tasked to develop a permissive State RFP for CMSs.

-DECC should

support systems

b) An RFP should be issued to solicit price bids for the major categories of CMS products and services to lower the ceiling price any public institution would have to pay and to exert some influence on features and services these products should offer.

c) An inter-institutional taskforce should be established to evaluate current national initiatives to develop technical standards for producing instructional materials ("objects") that could be used in any standards-compliant CMS.

d) Proactive and cooperative steps should be taken to help campuses prepare for emerging developments in CMS and the delivery of online education. These include: analyses of and recommendations for the integration of CMS with campus information systems, experimentation with shared administration, faculty training, and support services among institutions, cooperative RFPs for CMS/Campus Information System Integration.

P.3 27 ***Portals* for distance education:**

a) Participate in the new State Portal for providing certain functions of wide-spread interest. Institutions should continue to develop their existing portal and Web pages to maintain their distinctive identify and to serve their constituency. The common Distance Education Portal should have the following features:

Agree. Agai
implementa
these functi
be a task of

convene a taskforce to implement recommendations cited in d).

n, -CCHE should
tion of fully participate in
ons should the State Portal
the DECC. initiative,
requesting
sufficient
funding to cover
the items listed.

-DECC should be

catalog/schedule of courses and programs, "consumer" information on distance education, a comprehensive list of higher education institutions with links to their home Web sites, a "getting started" guide providing information on technology and skills required for successful use of distance education courses, latest versions of software "plugins" commonly used in online education, a calendar of online educational and cultural activities available for free to Colorado citizens, *Time and Travel Expense Calculator* to enable students to calculate what they'd save in travel time/costs in distance education, and *Online Suggestion Box* on how services, offerings, etc. can be improved.

b) Additional functions should be considered at a later time by the CAO and CFO groups. They might include: market research activities aimed at Colorado, National and Global Markets, marketing/advertising activities aimed at Colorado, national and global markets, statewide RFP process for permissive purchasing of SST's, standards that promote the portability or conversion of content between different development tools and delivery systems, a database of sharable instructional components, learning modules, following the Project Merlot model, coordinating service staff, Links to Job Search Services, and a student ombudsman service to help resolve potential conflicts.

operationally tasked with implementing State Distance Education Portal functionality.

P.4	28	*Specialized video and media servers* . A statewide working group should be formed to address the issue of shared central services to specifically to support distance learning buttressed by central hardware and software.	Agree.
P.5	28	*Turn-key services and external service providers*: a) institutions should decide how to use these services to complement their course offerings and supplement their resources based on their needs. b) an RFP should be issued to solicit price bids from at least two winning vendors. c) RFP's should be developed for three categories of services: (1) full service, including support for developing and converting course content; (2) Web hosting of course content developed and offered by institutions, and (3) 24x7 support. d) any turn-key service must give individual faculty members direct access for making small adjustments in course materials. Successful learning outcomes are best accomplished when faculty can tailor course content to their teaching style and their students' needs.	Agree.
P.6	28	*Back-end student administrative service systems*:	Agree. A course tra

DECC should form the recommended statewide specialized server working group in conjunction with the CIO Council.

DECC should develop and issue the RFP.

-DECC should establish standard file formats for

	a) institutions should be responsible for integrating their CMS and SIS. Standard file formats should be developed for exchanging data between institutions, the common platform, and external service providers.	database a planning t be include higher educ component State Port
	b) as the Academic Council works on further developing articulation agreements for transfer courses, attention should be given to the possibility of providing students with a degree planning tool that can be applied between cooperating institutions. Should a planning tool would allow students to plan for a degree when considering course offerings from multiple institutions.	The re common stu services and tuition (item d) implemente order: first non-degree non-credit next for stu enrolled programs by the comm developmer and then fo
	c) the institutions' SIS will serve as systems of record for student matriculation, registration and academic records, tuition calculation and billing, and financial aid for the student's home institution.	
	d) as the program plan for expansion of distance education is further defined, consideration will be given to providing common student service functions for non-degree students and non-credit programs. These functions would include registration and billing.	programs distance.
P.7 28	*Other technology related recommendations*:	Agree.
	a) consider joining the IMS Consortium in developing interoperability standards for course management systems and other online components.	
	b) develop guidelines that would minimize	

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inter-institutional data exchange.

-Funds for a transfer database should be included in CCHE's budget request to the State Portal project.

-DECC should establish common student service functions as per d).

-CIO Council should address SIS integration and data interchangeability.

Again, a DECC responsibility.

		b) develop guidelines that would minimize the cost of conversion of course content between systems.	
COURSE CATALOG TASKFORCE RECOMMENDATION			
C.1	44	CCHE should contract with one or more institution(s) of higher learning to act as the coordinator for a *Common Catalog Project*. Coordination will include methodology, design, testing, deployment and documentation. Contracted institution may also provide hosting.	Agree. Sinc institutions developing course ca makes sens "piggyback efforts. Als considerati be given t with the CI
ORGANIZATION TASKFORCE RECOMMENDATION			
O.1	51	A *Distance Education Coordination Council (DECC)* should be established to increase awareness, expand access, assure quality, and improve cost-effectiveness of certificate and degree programs offered via distance education by Colorado public institutions of higher education through statewide coordination of resources and services to competitively serve the needs of Colorado's citizens and economy. The DECC should be comprised of representatives from each higher education system, be supported with working taskforces in each area of concern, and advise and consult with existing CCHE councils. The DECC should have adequate staff to carry out the following coordination functions: implementation of a common course catalog and platform, inter-institutional coordination of credit transfer and tuition payments, student advocacy, market research, administration	Partially ag believes t should be CCHE pers

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CCHE should obtain 50% funding through State Portal project and institutions should provide the other 50%.

The CCHE Commission should pass a policy resolution jointly developed with the institutions with the support of the CEOs establishing the DECC including membership criteria, charter, staffing, and funding guidelines as per O.1.

During FY01, the CCHE CIO or designated representative

of program development grants, quality assurance and standards, and data collection and reporting. A consensus decision-making model should be employed whenever possible. The structural organization of this council should be reviewed after a year.

FINANCIAL TASKFORCE RECOMMENDATIONS

should fulfill the role as DECC director.

If development funds obtained in FY02, the institutions should be asked to fund this position as the DECC's first 1.0 FTE staff.

In FY03, CCHE should prepare a decision item for to fund any additional needed DECC staff.

F.1	54	*Student Tuition and Fee Rates* . Respect institutional differences in the alternative delivery of education. Campuses should be free to charge appropriate tuition and fees and set other policies (e.g., the application of a "window" of credit hours for a flat tuition rate) in the manner that best meets the needs of the students they are serving.	Agreed. No comment
F.2	55	*FTE Funding*. Clarify the FTE reimbursement policy for distance education courses. In reviewing the CCHE policy, recognize the importance of institutional flexibility and that, because distance education is simply a method of delivery; the State should support resident online learners in the same manner as they support resident classroom learners. While some campuses may best serve their students by putting all distance education under the continuing education "cash funded" umbrella, where FTE reimbursement is not an issue. However, for the majority of campuses where some or all online courses are best delivered within the "regular" academic structure - State funding is appropriate. In addition, the CCHE policy of not counting baccalaureate institutions' FTE delivered "off site" (with the exception of certain approved programs) is inconsistent with the CCHE policy of counting all resident FTE in distance education courses. Certainly, these two policies should be reconsidered together and made consistent if possible.	Agreed. C convened a FTE review which wil consideratio distance FTE should handled. CC that FTE on-campus a at-distance should be fundamental same, diffe all, only in with cost o
F.3	56	A central fund for content development is <u>not</u> recommended. It is not clear that this would benefit the state's distance education delivery and there are significant concerns with the	Disagree. I provides th recommend CCHE belie

te CCHE for A.8.	No action needed.	
CHE has n internal taskforce l include n of how education be HE agrees policy for nd courses ly the ring, if at accordance f delivery.	CCHE FTE Taskforce.	
Note A.12 e opposite ation. ves a	See A.12.	

		financial impact to ongoing campus operations. In the event that a central fund is implemented, it should be done in such a way as to best maintain institutionally flexibility. A one-time state appropriation that has no impact on campus general funds would be such a mechanism. If there is also an associated requirement that the fund be maintained, and then each institution should be able to determine how it should finance its proportional share.	central fund is order to prov incentives fo constructive distance practices, use of a com platform, co in course de and delivery faculty sup efficient, stu centered serv	de ne
F.4	59	*Funding a central organization* : if the governing boards CEOs support the concept of some type of statewide distance education coordinating body, we recommend a council staffed by an individual who reports to the governing boards. This would be similar to the higher education fiscal coordinator who reports to the CFOs.	Partially agr See O.1.	
F.5	59	*Funding the Common Course Catalog*, which would put upward pressure on quality and downward pressure on prices as students have access to a wide variety of choices, does not necessarily benefit individual institutions, but meets a public policy concern. The implementation costs should be borne by "new" State funding that does not negatively impact campus funding. The cost of ongoing operations is an issue for future discussion, perhaps by the governing boards' distance education coordinating body.	Partially Ag plans to cov through p in the St project.	

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change in
education
including:
mon
llaboration
velopment
, adequate
port, and
dent-
vice.

ce. See 0.1.

ree. CCHE See C.1.
er this cost
articipation
ate Portal

		However, a centralized policy-making and grant making organization is not recommended. Any organization of this type would require a commitment of significant state resources. The state is already experiencing a significant annual increase in the online course enrollments, evidence that many of the institutions are already responding to the demand of the consumers through offering improved access.	CCHE does centralized making orga (see F.3 and
F.6	59	Regarding a *Common Platform*, the direction taken by the Common Platform taskforce is recommended, that is, that institutions continue to have flexibility to use the technologies and services that best meet their needs and spreads risk in the mission-critical delivery of distance education. There are significant financial and operational dangers with the selection of a single platform because this is an emerging industry with the inherent instability of a growth area. A single vendor, in essence, places all our eggs in one basket.	Agree.
PRIVATIZATION RECOMMENDATIONS			
V.1	66	Institutions should continue to support enterprise structures for continuing education, life-long learning markets for adult learners when the program and course content is substantially distinct and separate from programs offered on campus.	Agree.

support a grant nization A.12).	See A.12.
	See P.1 and P.2.
	No action required.

V.2	66	A pilot program should be established to explore how the hybrid enterprise/state-funded model may be extended to multiple institutions under differing governing boards, on a voluntary basis, in certain applicable programs of study.	Agree.
V.3	67	Institutions should be encouraged to form liaisons among themselves within Colorado to fill gaps in curricular offerings needed to address local student market needs.	Agree.
V.4	67	The collective body of State institutions of higher education should form a buying cooperative and secure permissive master State awards for (a) e-learning ASP services, (b) distance education software licenses, and (c) licensed content, where the procurement awards include specific tiered pricing structures rewarding higher volume with price discounts.	Agree.

This should be a priority approach in funding programs through the central development fund. See A.12.

This goal should be augmented through the funding policies for the central development fund. See A.12 and O.1.

This recommendation is a reiteration of P.1 through P.5.

BUDGET

The above recommendations each has budget implications. A full analy
recommendations is beyond the scope of this report. Such requirement
fulfilled from a variety of sources, including State Capital Funds, the S
and student fees. To the extent possible, the Proposed Action column i
funding amount, source, and timing. However, certain capital items ha
three-year capital budget, as follows. Note it is CCHE's position that th

SUMMARY

ysis of the budget requirements for the full implementation of these
s would include both capital and operational funding. They would be
tate General Fund, institutional discretionary funds, and student tuition
n the Recommendations Summary includes suggestions with regard to
ve been developed in this report in sufficient detail to present a rough,
ne market study be funded by institutions.

TITLE

CAPITAL BUDGET ITEMS
CCHE Distance Education Taskforce Recommendation

	Note	FY02	FY
Market Study	(1)	400,000	
Portal Services			
- Common Catalog	(2)	135,825	145,
- Credit Transfer Database	(3)		50,
- Course Management Services	(4)	250,000	500,
- Media Servers	(5)	100,000	150,
Course Development Fund	(6)	2,953,120	2,953,
TOTAL		**3,838,945**	**3,798,**

NOTES

(1) Other states' studies have ranged from $200,000 to $400,000. We target a phone s various student markets in Colorado. A good estimator of market survey research is abo yields the estimated budget of $400,000.

(2) Common catalog as proposed by CCHE Distance Education Taskforce. Cost eleme software, development, site hosting, contingency, marketing.

(3) Credit transfer database figure is estimate for development, then maintenance.

(4) Course management services are to support application service provider (ASP) supp users in courses supported under course development fund. State goal is 10% of total c about 77,500 headcount. Current headcount is about 17,500. To fill the gap we need to per year, cumulative. Typical ASP hosting charge is about $20 per headcount.

(5) Capital cost for specialized servers (streaming video and audio) to support media-en education offerings. Cost is estimated at present. It is estimated that disk space (the p $100/hour high-quality video. Thus, this request will support 1,000, 2,500, and 4,500 ho

(6) Course development fund is estimated at $8,000 per course, $4,000 development a Goal is to reach 10% of all degree program courses. There are 18,457 such courses, s courses. The goal is to develop these course over a five-year period. That is 369 cours each totals $2,955,200 per year.

INTR

Background on Distance Education in Colorado and Other State

BEST COPY

03	FY04
99	152,669
00	20,000
00	750,000
00	200,000
120	2,953,120
519	4,076,789

urvey of 4,000 persons in
ut $10 per contact, which

nts include server and

ort of distance education
n-campus enrollment, or
add 12,500 headcount

hanced distance
incipal cost) is about
urs video content

nd $4,000 maintenance
10% would be 1,847
es per year at $8,000

ODUCTION

The fall 1999 HB99-1289 Report, Chapter XII on Distance Education, in Colorado's public higher education institutions:

- 27,031 course enrollments in 2,973 courses overall (all forms of d
- 12,747 course enrollments in 1,714 courses online only
- average class size of 10-12 students
- course offerings at each level of instruction, in both 2-year and 4-y
- online (typically Web-based) classes dominate and are rapidly acc
- course offerings and enrollments of video-based classes are declin
- distance learning is most used (69 percent) by students in lower di

For national context, a recent SHEEO survey [Epper, Ronda Martin, S Education Executive Officers, Denver, Colordo, March 1999.] of 44 st

- 33 participate in state or regional virtual university initiatives
- 15 have created their own distance education coordination entity
- almost all have some system-wide utility functions, including:
- 20 have central catalogs
- 10 provide student services (from admissions to financial aid)
- 10 have content development
- 9 have multi-campus collaboration in statewide degree programs
- over half require additional approval to offer existing programs at
- most have eliminated geographic service areas
- most charge the same tuition for regular and distance classes.

Colorado has yet to establish any of the above statewide coordination f

Authority and Direction for this Report

House Bill 99-1289

This is the second of two annual reports to the Colorado General As was included in the overall HB1289 report filed with the General Asse

This second-year HB99-1289 on distance education reviews and mak education to meet the needs of populations throughout the state. Sp

provided the following snapshot for 1999 for distance education activity

istance education)

ear institutions
elerating relative to other media
ing
vision courses

tate policies for distance education: A survey of the states: State Higher
ates found that:

a distance

unctions.

sembly on distance education as required by HB99-1289. The first report
mbly at the and of 1999.

es recommendations regarding the potential for increased use of distance
ecifically, the HB1289 legislation requires that in FY00 CCHE prepare

reports:

1. examining the potential for increased use of privatization in obtain institutions of higher education (Section XVII, Part VI), and
2. describing information concerning the use and coordination of tech system of higher education and other states (Section XVII, Part VI
3. recommending how the State institutions of higher education can n needs of higher education and the demands of populations through in the delivery of distance learning services (Section VIIb).

These three requirements are addressed as follows in by this report:

1. The final chapter of this report addresses the issue of privatization
2. The appendix to this report contains a section summarizing the stat
3. The main outcome of this report, as presented in the Executive Sur effective use of distance education by Colorado institutions of high

Direction form CCHE Executive Director

The authority and direction for convening a statewide higher educatio programs statewide is based on direction to the CCHE CIO (Chief Inf consensus support of the CCHE CEO Council. The CEO Council recog to the technology to support distance education and th

Specifically, the CCHE CIO Council has been directed by the CCHE I CIO Council to establish a common platform and common core for specific charter is explicitly addressed in the report that follows, inclu our best understanding of what distance education is and ho

Formation of the CCHE Distance Education Taskforce

The CIO Council, in taking up this task, conducted five general representation drawn from Colorado higher education institutions and Chief Financial Officer Council, distance education program directors, in the appendix. Further, six topical taskforces were formed to provide The six taskforces were Market Study, Academic, Common Platform, was assigned a chair who convened a broader group with knowledge, e

ng and applying distance learning techniques and technologies by State

nology in higher education systems in other states and between the state
)
nore efficiently and cost effectively use distance learning to meet the
out the state including consideration of appropriate areas for privatization

and makes four recommendations.
e and national context of distance education.
nmary, is a set of 32 recommendations regarding the efficient and cost
er education.

n taskforce to develop an approach for coordinating distance education
ormation Officers) Council from the CCHE Executive Director with the
gnized that some statewide means of sharing is required both with respect
e development and delivery of distance education courses.

Executive Director and Director of Policy and Planning to work with the
distance education courses across all higher education institutions. This
ding substantial refinement and accommodation of these two concepts to
w it is currently and may possibly be conducted in Colorado.

meetings (throughout July, August, and September, 2000) with broad
ystems, including representation from the Academic Affairs Council, the
faculty, and students. Participation in the At Large Taskforce is presented
the expertise and direction needed in specific areas important to the goal.
Common Course Catalog, Organizational, and Financial. Each taskforce
xpertise, and experience pertinent to its topic. The topical taskforces were

also given a charter to address certain specific issues in their area identif

Product of the Taskforce

Each taskforce has prepared a report summarizing its considerations a reports make up the chapters of this report. The participants on each ta that these chapters are presented here as received, without modification.

CCHE Review of Taskforce Recommendations

CCHE staff and executive management have compiled a summary of t position with respect to each recommendation and indicated proposed herein. Also included in the Recommendations Summary is a

Guiding Principles

At the outset, the taskforce adopted the following set of principles to g tested against the following guidelines. It is our belief that all of the principles (presented here with some of the more obvious implications l

1. Growth and coordination of distance education programs should be build synergistically on existing institutional strengths.
2. An institution's role and mission, academic standards, and commit delivery.

- Appropriate State (FTE, capital) support should be available to bot
- Tuition and fees will vary institution-to-institution, reflecting diffe
- Student services should be equally available for the distance and th
- Accreditation standards should be applied equally to distance and
- Rigorous assessment of course, teacher, and student are a requiren
- Needs specific to distributed education courses must be fully supp

3. Information technology competency is desired of all faculty and st

- The synergy between technology-enhanced and distributed educat
- Technological tools required for professional competence in a dis
- Faculty training and support in the use of technology for on-camp

ed by the At Large Taskforce.

ıd providing policy recommendations and funding implications. These kforce are recognized at the end of their chapter. It is important to note as the consensus view of taskforce participants.

ıe taskforce's recommendations. In this compilation, CCHE has taken a action. The summary is presented in the Recommendations Summary compilation of the budget implications of the recommendations.

uide its deliberations. That is, each conclusion and recommendation was recommendations made are consistent with each one of these guiding isted underneath each):

based on incentives that encourage collaboration, cooperation, and

ment program assessment are independent of mode of instructional

h.
ring cost structures.
e on-site student.
on-campus programs.
ent of both on-campus programs and distance programs.
orted.

udents in recognition of its cultural and economic importance.

on should be recognized and exploited.
ipline should be available both to the classroom and the distant student.
s and distributed programs should be integrated.

- There is a need to assess and improve the effectiveness of the use

4. Distributed education transcends location.

- Students should be able to access courses outside their home instit
- Administrative and organizational practices (including registration success in distributed education.
- Students need an advocate to help resolve home-vs.-delivering inst
- Distributed education should maximize access for students with di
- Collaboration and the use of standards in the development and sha

Goals For Colorado Distance Education

The following goals and expected outcomes were formulated by CCH recommendations:

1. Increase access for Colorado students. Significant markets include:

- adults continuing education
- completing degrees
- rural
- on-campus students with course schedule conflicts
- on-campus students that prefer it

2. Create a marketplace for distance education

- recognize distance education transcends geography, we need to ma
- remove barriers to this marketplace
- knowing what's available -- common course catalog
- having courses be transferable, and easy to do so, and count towar
- having tuition allowances for taking courses at non-home institutio
- having courses that start & end more frequently than semester by s
- (open entry/open exit)
- having effective advocacy, an ombudsman

3. Make effective use of existing resources

of technology in instruction.

ution.
, tuition, credit transfer) should contribute to student access to and

itution issues.
sabilities.
ring of course content should be encouraged.

E staff and referred to the taskforce for their consideration in developing

ke all courses accessible to all

d major
ons
emester

- share common infrastructure and services (RFPs for server farms,
- coordinate course development efforts -- not a "common core" but
- assure campuses are providing adequate
- quality assurance (faculty training and support)
- quality control

4. Accelerate diffusion of technology into teaching and learning -- at di

- create central self-replenishing pool to fund targeted distance educ
- seed with CCF, replenish with distance education headcount asses
- provide FTE incentives just as for resident instruction
- assure technology environment same at distance as in classroom,

5. Pilot new teaching paradigms that make cost-effective use of techno

- exploit economies of scale enabling the desegregation of teaching
- the functions are: outcomes, content, mentoring, assessment

6. Position Colorado institutions to be competitive in the global marke

- develop global niche markets in our "core competencies"
- offset local losses to global markets with global gains in local ma

7. Incorporate distance education enrollment in capital assets managem

- use capital assets to capitalize a distance education course develo
- avoid new construction when possible

8. Create coordinating office to administer these goals supported by in

MARKET STUDY

Market Study Objectives

The objectives of a professional market study of the Colorado dist

- **Facilitate CCHE's overall goal of improved access to quality**

24X7 help, software)
a "coordinated corpus"

stance and in classroom

ation course development
sment

one leverages the other

ogy

functions

place

rket

ent -- "clicks for bricks"

pment, distance education IT systems

stitutional advisory board

TASKFORCE REPORT

ance learning market are to:

online education and competition in the global marketplace.

- Provide CCHE and the State with data that can guide future eff
  rates in Colorado.
- Provide data on potential markets to support/validate CCHE's
- Provide key data on the size, educational priorities and other fa
  development (the business plan for program investments).
- Understand potential barriers that might prevent prospective st
-
- Guide marketing strategies and investments by the State and in

Scope of Initial Market Study

The market study should be outsourced to a professional market r
should establish a Distance Learning Market Research Advisory C
specialists and campus communications directors, to shape the dev
bids resulting from the RFP. This committee should make recomme
necessary, and the general content of the survey.

The scope of the initial market study is twofold:

- collect key data on the potential consumer market within Color
- identify business and industry workforce needs, including emer

Additional desired products of the study are 1) the ability to provi
higher education systems and 2) the identification of "trends" (e.
study beyond a single "snap shot" of today's markets and their need

Key Questions to Be Addressed

1. Who are Colorado's unserved and underserved markets?

- Identify the demographics of these markets – age, educational c
  needs including disabilities for learning in an online environme
- Key populations to be surveyed would include: high school stud

  on-campus and online programs, working professionals in busi
- Identify the size of these populations. Is there a sufficient mark

forts to increase college participation, persistence and completion

legislative request for funding.
ctors that will guide CCHE decisions on funding of new course

udents from taking an online course.

stitutions.

research firm, with expertise in higher education preferred. CCHE
Committee, comprised of distance education directors and market
elopment of an RFP, establish the review criteria, and evaluate the
ndations relative to the size of the survey, whether focus groups are

ado for increased distance learning opportunities.
ging education and training needs.

de benchmark and other comparative data with other states and/or
g. demographic, socio-economic) that would expand the life of the
ls.

redentials, history of participation in online education, special
nt.
lents, IT workers (entry-level and professional workers), residents

ness, health care, education and other targeted fields.
et on which to develop a business and marketing plan?

2. What educational programs and opportunities are these mar

- Individual courses vs. degrees and certificates?
- Type of degree sought (associate, baccalaureate, graduate, pr
- In what disciplines?
- A fully online degree vs. courses transferable to a campus-ba
- Certificates, credentials?
- Credit or noncredit continuing education?

3. What educational programs, opportunities and services do e
mode? In addition to convenience, what do they like about o
coursework do they want to take in an online or distance edu
4. What criteria do students use to choose their college or progr
affiliation? This information will provide indicators on how t
5. What is available to them in terms of access to technology an
Internet service?
6. What are they willing/able to pay for enhanced access to edu
7. What type of learning "environment" do they prefer?

- asynchronous vs. synchronous communications, day/time pre

8. What "services" should be available to ensure their success?

- Technical help desk services during what hours?
- Academic advising during what hours? By phone? By email?
- Tutorial/orientation to the features of the course managemen
- Need for some in-person communications with faculty, advis
- Etc.

In addition to studying potential <u>new</u> consumer markets, th
workforce needs. Initially, this could be facilitated through CC
added to the scope of the consumer market study thereby re
activities albeit limited to the IT industry. CCHE's broader agen
the assessment process utilized by CIT.

<u>Assessing National and Global Markets</u>

ets interested in?

ofessional)?

ed program?

isting, campus-based students want to obtain in a distance delivery
line education? How much of their formal higher education
cation mode?
am of choice—tuition, the degree, name recognition, location, family
o retain our Colorado market.
d Internet access? Do they have access to modern computers and good

cational programs and services?

ferences for study, etc.

t system
ors, program personnel

study should examine employment trends and emerging industry
HE's participation in the Colorado Institute of Technology and not
ucing some costs. CIT will be conducting its own needs assessment
la for online education can benefit both from the actual data as well as

Competition in the global marketplace is intense and will likely co
niche in national and international markets for education and trai
and effectively serve markets outside of the state and therefore sug

Rather than a commissioned survey/analysis, the higher educatio
and specialty areas that may be either unique or limited in nu
example, individual disciplines are keenly aware of trends, certif
specifically to their discipline. Since the national/global study is
may be involved in coordinating this activity within their respectiv

A second study that would be valuable in understanding potentia
of Phoenix, the U.S. Open University, and the for-profit virtual ca
campuses offer in terms of flexible transfer policies, tuition inc
credit by evaluation, etc. Are we ready to adopt new policies and p

Market Analysis: An Ongoing Need

Goal #3 of the CCHE Distance Education plan addresses shari
increased efficiency and quality. It is strongly recommended tha
needs be assigned to the proposed Distance Education Coordinati
in Colorado, nationally and internationally, would accrue to the C
market study may point to opportunities for collaboration

Ongoing market analysis activities should include the following:

1. Develop an ongoing process for identifying emerging workfo
2. Conduct focus groups. Focus groups might be formed to addr

- Integrating clinical requirements into an online program in t
- Designing online programs for high school concurrent enroll
- Developing new IT training specialties
- Soliciting input on the provision of advising and other studen

3. Maintain linkages with the CIT planning process for new deg
4. Build into the central catalogue a response form to solicit info

ntinue as more institutions and new entities attempt to carve out their ning. "Niche" should be the key driver of Colorado's efforts to attract gests a very different approach.

institutions should do their own analyses of their program strengths mber in the national and global distance education enterprise. For ication requirements, and professional development needs that relate proposed as phase two, the Distance Education Coordinating Council e institutions/systems.

markets would be an analysis of our competitors, such as University mpuses of SUNY and others. For example, what do these other virtual entives such as resident-level tuition, free access to campus services, rocedures that are attractive to a non-Colorado based market?

ng and coordinating the use of resources with desired outcomes of an ongoing process for assessing markets and emerging educational ng Council. The benefits of ongoing analyses of the changing market, CHE and to individual campuses. For example, information from the among institutions to develop and offer specialized programs.

ce training needs.
ess specific needs, such as:

ne health professions
ment

t services

gree/new certificate development
rmation on desired offerings and services (e.g. CyberU.com)

Linking Market Research and Marketing

The market study is expected to produce valuable data relative programs and services to Colorado residents. For this reason, it h Advisory Committee include campus communications and marketi may provide indicators on the size of the potential market who are strategy. Another market of less sophisticated technology users resources available at the local school, library and grocery store (e. Independent Learning). As expensive as a comprehensive, professi investment that requires the right kind of input, given the ev promotion.

The development of a strategic marketing plan should be directe appropriate expertise involved. The marketing plan should cons State. Some initial suggestions are listed below:

- Create opportunities for cooperative marketing. For example, expensive. Institutions may be interested in jointly funding ad
- Examine the partnership model between the State, communiti models and strategies from this industry that could be applied
- The Common Catalog Taskforce has started to discuss strateg of distance education. Clearly efforts to market the Web-site n
- The Distance Education Coordinating Council should work w arrangement to fund marketing efforts.

Funding Requirements

Unfortunately, the timing for a legislative funding request is professional market study as soon as possible. Data from a profe should be integrated into further plans for this distance edu recommendations and decisions relative to common platform and

The estimated cost for a professional study of Colorado's distan appropriated by the State with opportunities for some cost sharing

Recommendation

to promoting and marketing higher education's distance education
as been recommended that the Distance Learning Market Research
ng directors in the initial design of the survey. For example, the study
regular, heavy users of the Internet, suggesting an online marketing
may do their shopping for educational opportunities through print
g. the high quality catalog produced by the Colorado Consortium for
onally-executed market research study may seem, it is an important
en higher costs associated with marketing, communications, and

ed by the proposed Distance Education Coordinating Council, with
der strategies that would be funded or partially subsidized by the

the cost for advertising in the in-flight airline magazines are quite
s targeted to busy working professionals in business and industry.
es and resorts in the Tourism industry. Are there some funding
to distance education?
ies for directing potential consumers to the statewide central catalog
eed to be linked to an overall marketing scheme.
ith the institutions to explore options for some cost sharing

not in sync with the recommendation that CCHE commission a
ssional analysis of the potential Colorado distance education market
ucation initiative in general and most specifically help to guide
new program development.

ce education market is between $300,00 -$500,000. Funds should be
with CIT to be explored.

The CCHE should assign a high priority to the conduct of a pro comprehensive analysis of the statewide market will provide the program investments, and should provide direction on needed " should take precedence, in terms of timing and resources, ove globally in the distance learning business. Finally, the proposed I for ongoing analyses of the changing marketplace within Colorado

Policy Issues

1. **CCHE has articulated the goal of increasing participation rat a partial solution to meeting this goal? What are the barriers barriers? Can distance education increase rates of persistence**
2. **The U.S. Department of Education [Projections of Education 2000] projections indicate that Colorado will experience an in 1998-99 and 2009-10. Can Colorado's institutions absorb thes current campus infrastructure? Can (and should) distance ed**
3. **Will there be new populations with different needs due to soc might affect the distance education market?**
4. **The proposal that higher education institution may consider hampered by a policy which disallows use of state funds for n use other dollars.**

Market Study Taskforce Participants

- **Mollie McGill, Office of Technology and Learning Innovation**
- **Gary Hatch, Assistant Vice President for Information Techno**
- **Allen Rowe, Interim Director of Instructional Technology, M**
- **Vicky Seehusen, Associate Vice President for Distance Educa**
- **Robert Tolsma, Executive Director, CU-Denver Online & Dis**

ACADEMIC TA

The Distance Education Academic Taskforce was one of six groups *programs statewide".* The Academic Taskforce was composed of i distance education instruction, distance education program implement

The charge to the Academic Taskforce was: "To Ex

ofessional market study of the Colorado distance learning market. A e foundation for CCHE's distance education initiative, should guide marketing" efforts by the state and institutions. The statewide study efforts to analyze Colorado's potential to compete nationally and Distance Education Coordinating Council should develop mechanisms , nationally and internationally.

es in postsecondary education in Colorado. Can distance education be to going to college now? Does distance education remove the and completion? Does it make it easier to stay in school?
Statistics to 2010, National Center for Education Statistics, August crease of 23 percent in the number of high school graduates between e additional new enrollments? Can they be accommodated by our ucation be a partial solution?
io-economic changes? What lifestyle changes are on the horizon that

participating in some cooperative marketing efforts could be marketing higher education programs in the State. Institutions must

ns, University of Colorado System (Chair)
ology, University of Northern Colorado
etropolitan State College of Denver
tion, Community Colleges of Colorado
tance Learning, University of Colorado at Denver

SKFORCE REPORT

established to "*develop an approach for coordinating distance education* ndividuals who are experienced in public academic policy development, ation and distance education program management.

amine and Recommend approaches to the following issues:

Content and Degree Requirements

- What should be the composition of the *coordinated core*? (The coo
  the learning needs of Colorado citizens and represents the academi
  Web supported environment.)
- How should the core be phased in?
- What quality standards should be in place?
- Identify any new transfer issues related to the presence of the *coor*
- Are there issues related to course names and numbers that should b
- Is there any accreditation issues that should be examined and resol

Intellectual Property

- Make recommendations about *rights/ ownership/entitlements* relat

Development

- Make recommendations related to Faculty workload, training, supp
- Make recommendation about course development.

Implementation

- Pose consensus and/or competitive mechanisms for allocating dev
  Organization.
- Faculty incentives related to teaching online courses.
- Pose mechanisms related to course delivery to fully staff course se
  member be tied to a course developed for the coordinated core.

During a series of three meetings held on August 24, September 7 and
recommendations were developed. Additionally, as the Taskforce dev
with the primary focus being online course delivery, it seemed prudent
entity developing online education for the citizens of Colorado. The re
recommendations.

Issues and Recommendations

ordinated core is envisioned as an inventory of online courses that meets
c strength and uniqueness of each institution, available within a common

dinated core and recommend solutions.
e resolved?
ved?

ed to online courses developed by the Central Coordinating Organization.

port services and incentives.

elopment responsibility under funding from a Central Coordinating

ctions by single or multiple institutions. To what extent would a faculty

September 19 2000 each of the issues was examined and corresponding
eloped its dialogue about academic issues related to distance education,
to establish a set of general principles that could provide guidance to any
mainder of this report will be devoted to succinctly articulating Taskforce

Issue 1. Colorado's public institutions of higher education commit an i
delivery of *online* distance education, there should be a set of clearl
Colorado's online education initiatives will withstand the scrutiny o
distance education standards being utilized by regional and national acc

Recommendation. The Academic Taskforce endorses use of the ***Guidi***
first developed by the *American Council on Education* in 1996. The
approved by the U.S. Department of Education, has also adopted these

Guiding Principles:

Learning Design

Principle: Distance learning activities are designed to fit the specific
outcomes, needs and goals of the learner, the learner's

Subprinciples

Learning opportunities include a clear statement of intended learning
expectations of learner activities, flexible opportunities for interaction,

1. Elements of a learning event—the learning content, instructional
2. The selection and application of technologies for a specific learni
matter content, relevant characteristics and circumstances of the l
3. Learning activities and modes of assessment are responsive to the
4. The learning experience is organized to increase learner control o
5. Learning outcomes address both content mastery and increased le
6. Individuals with specialized skills in content, instructional metho
opportunities.
7. The learning design is regularly evaluated for effectiveness, with

Learner Support

Principle: Distance learning opportunities are effectively suppor

Subprinciples

ncreasing amount of their instructional resources to the development and
y stated principles that provide guidance for this activity to ensure that
a national and global academic market place as well as the evolving
rediting associations.

ng Principles for Distance Learning in a Learning Society which were
Distance Education Training Council, a national accrediting organization
guidelines.

context for learning the nature of the subject matter, intended learning
environment, and the instructional technologies and methods.

outcomes, learning content that is appropriate to these outcomes, clear
and assessment methods appropriate to the activities and technologies.

methods, technologies, and context—complement each other.
ng opportunity are appropriate for the intended learning outcomes, subject
earner, and cost range.
learning needs of individual learners.
ver the time, place, and pace of instruction.
arning skills.
ds, or technology work collaboratively as a design team to create learning

findings used as a basis for improvement.

ted for learners through fully accessible modes of delivery and resources.

8. The providing organization has a learner support system to assist t
includes technology and technical support, site facilitation, library
assistance.
9. The provider considers the needs for learner support in relation to

10. Access to support services—such as scheduling, registration, and
learners as well as consistent with other elements of the delivery s
11. Support systems are accessible to and usable by the learners and a
12. The provider discloses to the learner all information pertinent to t
evaluation criteria, and technical needs—and provides some form
13. Support systems for each learning opportunity are reviewed regul

Organizational Commitment

Principle: Distance learning initiatives must be backed by an or
learning environment.

Subprinciples

14. Involvement in distance learning is consistent with the overall mi
into the provider's overall policy framework.
15. The providing organization makes a financial and administrative
and to support faculty and learner services needed to ensure an ef
16. Administrative and support systems (registration, advising, assess
coherent learning environment.
17. The organization's curricular and administrative policies incorpo
18. The provider makes a commitment to research and development
processes, and support systems involved in its distance learning a
19. The provider makes a concomitant investment of resources and e
involved in distance learning.
20. The providing organization recognizes effective participation in
staff and ensures that its policies regarding promotion, tenure (if
distance learning into the organization's mission.
21. The policies, management practices, learning design processes, a
ensure effectiveness and currency.
22. The provider does not distinguish between learning accomplishe
recognizing learner achievement

he learner in effectively using the resources provided. This system
and information services, advising, counseling, and problem-solving

the distance learning mode(s) used and makes provision for delivery of

recordkeeping—is convenient, efficient, and responsive to diverse
ystem.
re sufficiently flexible to accommodate different learning styles.
he learning opportunity—such as course prerequisites, modes of study,
of orientation for those desiring it.
rly to ensure their currency and effectiveness

ganizational commitment to quality and effectiveness in all aspects of the

ssion of the provider; policies regarding distance learning are integrated

commitment to maintain distance learning programs through completion
fective learning environment.
ment, etc.) are compatible with the learning delivery system to ensure a

rate the needs of distance learning as well as traditional learning activities.
of distance learning, maintaining a systematic evaluation of the content,
ctivities.
ffort in professional development and support of both faculty and staff

listance learning through its promotion and reward system for faculty and
applicable), and departmental/program funding reflect the integration of

nd operational procedures for distance learning are regularly evaluated to

d at a distance and learning accomplished through other means in

Learning Outcomes

Principle: Distance learning programs organize learning activit
these outcomes, and assess learner progress by reference to these

Subprinciples

23. When possible, individual learners help shape the learning outcor
24. Intended learning outcomes are described in observable, measura
25. The learning design is consistent with and shaped to achieve the i
26. Distance education media and delivery systems are used in a way
27. Learning outcomes are assessed in a way relevant to the content,
28. Assessment of learning is timely, appropriate, and responsive to t
29. Intended learning outcomes are reviewed regularly to ensure thei

Technology

Principle : The provider has a plan and infrastructure fo

Subprinciples

30. The technology plan defines the technical requirements and comp
31. The technology plan addresses system security to ensure the integ
32. The technology facilitates interactivity among all elements of a le
33. The technology selected for distance learning is fully accessible a
intended use.
34. Providers communicate the purpose of the technologies used for
understand its etiquette, acquire the knowledge and skills to mani
that the technologies are intended to support.
35. The technology infrastructure meets the needs of both learners an
learning community, and gaining access to learning resources.

Issue 2. What to call and how to identify the online courses that will
electronic portal.

There was unanimous support for the concept of including all exist

es around demonstrable learning outcomes, assist the learner to achieve outcomes.

nes and how they are achieved.
ble, and achievable terms.
ntended learning outcomes.
that facilitates the achievement of intended learning outcomes.
he learner's situation, and the distance education delivery system.
he needs of the learner.
clarity, utility, and appropriateness for the learners.

r using technology that supports its learning goals and activities.

atibility needed to support the learning activity.
rity and validity of information shared in the learning activities.
arning environment and places a high value on ease of use by learners.
nd understandable to learners and has the power necessary to support its

earning and, through training, assist learners, faculty, and staff to
pulate and interact with it, and understand the objectives and outcomes

d learning facilitators for presenting information, interacting within the

compose the catalogue of online courses that will be accessible through an

ing online courses as the base of Colorado's coordinated online course

initiative. The only qualification was to permit each contributing inst
they may not want to include in the catalogue. Reasons for this option
specialized purpose of some online courses. In general, however, t
influence the continuing composition of the online catalogue.

Recommendation. To avoid confusion with existing terms used in Col
that the existing pool of online courses that will form the base of the
Data Base.

Issue 3. The perceived *intellectual environment* will impact the dev
success of the Colorado's coordinated online course initiative.

Recommendations.

1. Faculty should be free and encouraged to bring forward creative i
creative ways to use the technology associated with online course deliv

2. New online courses should address the needs of the communities t
one of the best ways to determine which courses should be offered onl

3. Th quality of new online courses developed by public colleges sho
forces.

4. Institutions should be free to develop and offer online

Issue 4. The framing of Intellectual Property Policy within the contex
to be resolved.

Recommendation. The Academic Taskforce has not had sufficient
Intellectual Property issues. For the present, it recommends that syst
perimeters of those policies. And, as soon as possible, the CCHE shou
do not have an IP policy which includes the development of online co
if the CCHE is able to provide central funding for online course devel

Issue 5. While it is estimated that, currently, about 90% of the 170
transportable to other Colorado public colleges, the challenge of tran
increases. Professionally accredited programs, unique majors and G.P

itution to decide whether or not there might be some online courses that may include the inability to adequately respond to global demand and the here was agreement that the market place would be the best device to

orado higher education, like the common core, the committee recommends coordinated online course initiative be referred to as the *Online Course*

elopment of new online courses and will be extremely important to the

deas for new online courses that address not only contents; but also, also very.

hat each of the public colleges serves. The academic market place will be ine.

uld not be compromised in order to respond to unsubstantiated market

courses that are not included in the "online course data base".

t of traditional higher education values is one of the most important issues

time to develop a comprehensive recommendation on the resolution of ems that have IP policies continue to develop online programs within the ld develop an IP policy which could be utilized by those institutions which urses/programs. The Taskforce feels that this will be particularly important opment.

) online courses currently available from public colleges in Colorado are sferability will increase as the volume and specialization of online courses A. standards are among a few of the issues that will need to be considered.

Addressing these issues at the beginning of the online project can also
that for many major/minor-specific courses the decision about the ac
department chairperson.

Recommendation. For each course listed in the coordinated online c
Colorado public colleges. A Taskforce to work on this project should
existing Transfer Policy should be reviewed and modified to accomm
class schedule and thereby increase course transfer traffic. The ability
home institution suggests a new way of viewing course transfer. Th
accommodate the academic phenomenon.

Issue 6. A coordinated statewide online course/program initiative
continuing and consistent focus for the initiative.

Recommendation. Organize a Distance Education Consortium with
education initiative. The consortium should have standing councils wh
Systems, Finances and Market Strategies. In its early stages, a Colo
common understandings already achieved by the six working Distanc
academic responsibilities of a consortium, a council could be estab
members, extended studies officers and instructional designers wh
approval of new online courses/programs. Specific academic issues
existing administrative units or committees for resolution and/or polic

Issue 7. Student Academic Support Services. The Academic Taskforc
must be available, if the coordinated distance education initiative
acquisition of course related materials, and 24x7x365 support are exar
stages of development with respect to these services. To insure that
services as one of the screens when an institution proposes to offer
support services is also an opportunity for Colorado to pilot electroni
appropriate online course or suggesting other instructional m

Recommendation. The development of new online course should inclu
retention in online courses.

Issue 8. Establishing an equitable and market sensitive tuition rate.

Recommendation. If a common online tuition rate is established, tha

offer a major service to the consumers of online courses. It is recognized ceptance of a course by the receiving institution lies with the appropriate

atalogue, provide direction on the transferability of that course to other l include curriculum officers, transfer officials and registrars. In addition odate the growing tendency of students to use the online mode to build a of students to electronically reach out for a course while remaining at their is new reality will also require that *Admission Policies* be modified to

will require some type of standing organization in order to provide a

support and guidance from the CCHE to develop Colorado's distance ich deal with Academic, Common Course Catalogue, Technology Support rado Online Consortium would leverage the experience, momentum and e Education Taskforces which produced this report. Referring only to the lished which includes academic administrators, practicing online faculty o would apply established CCHE academic policies to the review and that emerged from the coordinated online initiative would be referred to recommendation.

e recognizes that there are specific academic student support services that is to thrive. Academic Advising, Registration, Payment Services, the nples of the minimum needed services. Colorado institutions are in various students receive adequate support, it may be necessary to include support a new online course/programs. The thoughtful development of academic c screening mechanisms for the purpose of directing students to the most odes which are more appropriate to the students learning style.

de appropriate academic support services to insure student *persistence* and

rate should not place any students, who are currently able to take online

courses from public institutions, at an economic disadvantage. Tuition
and secondarily on the out-of-state academic market place.

Issue 9. Before new online program/course are developed, a "needs
including many general studies courses have already been reformatted
not clear. Demand for new online programs/courses needs to be me
community development requirements, access by potential students to
providers.

Recommendation. Conduct either a statewide or selectively focused
content areas that respond to workforce development, regional and cor
courses. Potential demand should also measured against the increasing
by the Market Taskforce.

Issue 10. What criteria should be considered in the development proces

Recommendation. Program/course demand, similar or duplicate course
a few of the criteria that should be considered when new courses a
Learning Outcomes Subprinciples" presented as a part of Recommenda

Issue 11. Incentives for both faculty and systems/institutions will be ess

Recommendation. For faculty members who are encouraged to develop
for course development, extensive and *continuing* faculty developme
cases when faculty develop unique courseware, software or any marke
revenues.

Incentives for institutions could include funding incentives which are
technology renewal, instructional technology staff positions, inclusion
of online courses delivered by other Colorado public institutions.

Issue 12. The potential for using online delivery to efficiently and effe
the most significant public education opportunities since the inception
online courses have been developed, it would be prudent to engag
courses/programs.

Recommendation. To maximize the potential for the development of n

rates should be established with the primary focus on Colorado residents

assessment" should be conducted. Because many high demand courses, for online delivery, the composition of the next generation of courses is asured in conjunction with workforce development needs, regional and adequate technology and the rapidly increasing number of online course

'needs assessment" that tests the potential for: online course demand in mmunity educational needs and appropriate technology required for online number of providers. The Taskforce agrees with the direction suggested

s for new online courses?

s, an assessment process and highly evolved interactive design are among re being developed. The Taskforce endorses the "Learning Design and tion 1.

ential to encourage the growth of online program/courses.

online program/courses, incentive options should include reassigned time nt, monetary incentives, and assistance from instructional designers. In table online enhancement, there will be opportunities for faculty to share

inked to: continuing support for the electronic delivery of online courses, nto the funding section of QIS for online course development and the use

ctively improve access to course/programs for Colorado citizens is one of of the community college movement. Now that many of the most desired e a broader state-wide perspective in continuing development of new

w online courses and programs within Colorado public higher education,

to provide an incentive to develop specific programs that serve priority
access to higher education for all Colorado residents through an on
centralized funding source. In making this recommendation the Taskfor
on the successful Programs of Excellence.

Selected Common Standards & Best Practices Reference Material a

DRAFT *Statement of the Regional Accrediting Commissions on the Ev*
Guidelines for the Evaluation of Electronically Offered Degree and C

Measuring Students' Learning Is A Major Challenge for Distance Edu
August 25, 2000

Quality on the Line, *Institute for Higher Education Policy April 2000* w

Developing a Higher Education Policy for the 21st Century, ACE, Mar
washington/distance_ed/2000/03March/distance_ed.html

Quality Issues in Distance Learning AACSB '99

Distance Graduate Education: Opportunities and Challenges
www.cgsnet.org/Distance2.html

Guidelines for Distance Education, International Association for Conti

Distance Learning in Higher Education, Council for Higher Educat
www.chea.org/Commentary/distance-learning-3.cfm
www.ihep.com/PR7.html

An Emerging Set of Guiding Principles and Practices for the Design
1996 www.outreach.psu.edu/de/ide

Indicators of Good Practice in Undergraduate Education: A
www.NCHEMS.org/Publications/indicators_of.htm

Evaluating Distance Learning Programs, Flashlight Project, www.tltg

economic development goals and to maximize the potential for statewide line delivery mode, the Taskforce recommends the development of a ce encourages the implementation of a funding process which is modeled

nd Commentary

aluation of Electronically Offered Degree and Certificate Programs and ertificate Programs, Sept. 2000 www.wiche.edu/telecom/guidelines.htm

ucation: Logging in with James Mingle, Chronicle of Higher Education,

ww.ihep.com/PR17.html

ch 2000 www.acenet.edu/

for the 21 st Century . Council of Graduate Schools, 1998

uing Education and Training, 1997

Accreditation, Update #3, 2000

& Development of Distance Education, *Pennsylvania State University,*

Handbook for Development & Implementation, NCHEMS 1996

oup.org/programs/flashlight.html

Guiding Principles for Distance Learning in a Learning Society, recommended in **Recommendation 1.)**

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COMMON PLATFORM
A Common Framework for L
Distance Education

Introduction

In the last few years, the public Colleges and Universities of Colora teaching and learning environment beyond the traditional classroom. W the big growth area, and the topic for this report, is Web-based online receive in campus classrooms as well as provide courses and even com technology to supplement their campus courses, and over time ha completely online. Although the goal of this report is to make recom the technologies used to enhance campus instruction and to offer dist both purposes.

The public institutions of higher education have primarily aimed thei educational content. The goal is to provide equivalent learning experi targeted their efforts only at the narrower skilled-based training market

The software tools necessary to create technology environments to su Much experimentation still needs to take place. Nevertheless, we beli the art of distributed learning, and the maturing of technologies mak

The American Council on Education, 1996. (Source for the principles

nded Studies, CCHE (Chair)

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M TASKFORCE REPORT
everaging Technology to Expand
Programs in Colorado

ado have gained considerable experience using technology to extend the While we have a history of using correspondence and interactive television, instruction. This technology is used to supplement the instruction students plete degree programs for students at a distance. In many cases faculty use ve developed the skill and material necessary to provide their courses mendations concerning distance education, it is crucial to understand that ance courses are often the same, and the same faculty often use them for

r distance courses to provide comprehensive learning experiences, rich in nces for students at-a-distance as for on campus. The institutions have not

pport this more complex educational experience are still in their infancy. eve the scale of campus activities in this area, our growing knowledge of es it an appropriate time to examine the relevant standards, services and

technologies (SST's) that are required to increase the quality and effic

The best strategy at this time is providing a ***common learning frame*** learning framework builds on the programs, courses, and expertise residential, on-campus instruction with distance education programs. content. It requires agreement on standards for sharing information a cooperating platforms.

A common framework consists of three distinct platforms: A Comm purposes, a platform is a collection of hardware and software providi are described below but first a definition for the different platforms is

A Common Platform: Those standards, services and technologies (SS

> Example: It may be in the public interest to have a catalog any public institution.

Cooperative Platforms: Those SST's that it makes sense for groups o

> Example: Groups of institutions may choose to share a vi makes it ineffective or inefficient to operate their own. Li

Institutional Platforms: Those SST's it makes sense for each instituti

> Example: Specific technologies closely managed and contr distance education.

Key Services and Components of a Common Framework

A number of distinctive components comprise the services and t components are in place today on institutional platforms. But, the pro components. These components will reside on the different platforms in subsequent sections.

- Portal(s): A portal is a gateway for accessing services and inform other organizations. A portal presents to the user pertinent servic integration of electronic services, for personalization, and for "pu

iency of distributed learning.

work for developing and delivering distance education courses. A common already in place at institutions. It leverages the resources and assets of It encourages collaboration and sharing of course components and course nd content. It allows for dynamic sharing of information over a network or

non Platform, Cooperative Platforms, and Institutional Platforms. For our ng a set of services. The different services and components of the platforms given:

T's) that all institutions can share.

and/or schedule of all distance education courses offered at a distance by

institutions to share.

deo server if their lack of in-house technical staff or low utilization rates praries are using cooperative platforms to share digital learning materials.

on to manage individually.

lled by academic programs that highly leverage residential instruction with

chnologies required for online education. Almost all of these different ducts are quickly evolving. At this time, we have identified six technology of the common framework, and are introduced below and further described

ation that may derive locally or, more likely, remotely, i.e., provided by es and information in an organized fashion. Portals are useful for shing" information to users of the portal. Each higher education institution

has a portal to the institution now. It is their Web home page and
faculty, staff, alumni, and others. Commercial software products
communication functions. They can integrate course delivery syst
services. Today's commercial products are not very flexible.

- Software Tools for Developing Course Content: These are tools
number of standard products are in use and range in sophisticatio
often use the same tools to complete homework assignments and
- Course Management Systems: CMS's, or LMS's (Learning Mana
information systems designed to assist instructors with the delive
present material to the students. They also provide essential elect
students. They offer faculty academic and administrative tools su
software. Administrative tools of this type are available as stand-
those products integrated within CMS. Faculty are making increa
easier to use.
- Web Servers and Related Software: The workhorses of online ed
Web-based online education. Many higher education institutions
education and residential online education. The software provide
encryption, audit logs, performance management, redundancy, an
- Specialized video and media servers: In a later section, these are
current state of learning technology that is widely deployed at tha
mostly by "early adopters." Video servers will allow faculty to in
students and to provide additional learning material. Today's vid
expensive compared to standard Web servers.
- Back-end Student Administrative Systems: Each institution uses
processes that include admissions, registration, financial aid, pay
systems will need to become more integrated with the CMS's. M
services that are tied directly to their Student Information System
through the Web. These include applying for admissions, registe
a transcript, and checking on degree progress.
- Turn-key Services and External Service Providers: Higher educa
example, UCD and UNC uses e-College to develop and deliver a
Jones for all of their online offerings. Other venders (e.g., Blackb
offer similar sets of services. Vendors vary considerably in the se
and purchased ala carte. External vendors remain a vital option.
and for smaller institutions with fewer resources a viable avenue
the right approach, both economic as well as programmatic.

the collection of Web pages that are used by their community of students,
are available to help institutions manage these information and
ems with the whole spectrum of other campus information systems and

sed by faculty to develop multi-media, Web-based course content. A
n. The tools are typically used on the faculty member's PC. Students will
participate in classes.
gement Systems) as they are sometimes called, are software programs and
ry of online education. They are used to organize online material and
onic interaction between faculty and students, and between students and
ch as calendars, grade-books, student assessments, and test creating
alone products, often with more advanced features and functionality than
sing use of these products as the products become more sophisticated and

ucation, these are the computers and related software which deliver
have developed a fairly sophisticated array of servers to support distance
s essential services such as access authorization, directory services,
d basic Web services for other application software.
characterized as advanced technology servers to distinguish them from the
t time, and is therefore a "moving target." Advanced technology is used
corporate more multi-media content into their courses to better engage
eo quality is not very good but is improving rapidly. Video servers are

a Student Information System to manage its student administrative
ment of tuition, and academic record management. In the future, these
any of the Colorado higher education institutions have Web-based student
s. Students can already conduct many of their routine administrative needs
ing for courses, paying tuition, checking on financial aid status, requesting

ion institutions use services from e-College and Jones Education. For
large number of distance education courses. Metropolitan State is using
oard), who in the past have offered only software, now are beginning to
rvices they offer and the degree to which those services can be unbundled
They can often provide a quick means for institutions to develop courses,
for providing additional offerings. There are many tradeoffs in choosing

Further Assertions and Assumptions

The following assertions and assumptions guided our recommendatio

1. Software and services market. The market for courseware and co
New vendors are appearing with new product offerings. Many in
next few years.

Implications: Be careful in betting on any one vendor at

2. Leverage existing technology between residential and distance e
residential, on-campus instruction. These materials are used at a
housing). In some cases the courses are converted to distance co
Blackboard, a CMS product, for on-campus courses. Many of th
with the potential to become fully at-a-distance courses.

Implications: It is critical that solutions for distance educatio
developed should be able to be used in both campus and dist

3. Courses should be managed by academic units. In a survey cond
student completion rates and satisfaction were in those courses
(completion rates 92% of traditional classes). Students had the l
managed by separate distance education organizations that were
campus (33%). *[From a presentation by Michael Zastrocky at t*

Implications: Faculty must be involved in both course develop
offered as part of regular academic programs. In addition, degr
well-educated, informed citizens. Moreover, offering distance
and may not be experienced by students as equally satisfying a
educational institutions.

4. Faculty support. Faculty support is one of the greatest needs in
are still difficult to use. Faculty are still exploring ways to make
most directly enhance learning, i.e., content and pedagogy as op
personnel include individuals with knowledge of technology an

Implications: This will require an investment in new staff or alt

ns.

ourse management systems is quickly evolving. There are no clear winners. ndustry observers expect a significant consolidation of the market in the

this time in the product areas of CMS, content provider, and portals.

d. There is a significant amount of course content being put on the Web for distance, albeit short (on-campus PC labs, residence halls, off-campus urses using the same content and technology. For example, UCD is using ese courses are evolving into hybrid on-campus and at-a-distance courses

n be consistent with our on-campus environments. Online content that is ance environments. It should be transferable between either environment.

lucted by the Gartner Group on e-learning, they found that the highest where faculty controlled the content and managed the course offerings east satisfaction and completion rates in those courses controlled and not part of the academic structure that managed academic affairs on *he Gartner Group Spring 2000 Symposium]*

ment and course enhancement. Students are more satisfied if the courses are ee programs offered by academic departments ensure that students become education directly from a central State organization may not be as effective, s if they were offered through the normal academic structures of individual

developing course content and in making effective use of CMS. The tools the best use of the tools. Faculty time should be spent on those things that posed to "navigating" through complex software systems. Support d pedagogy. Content knowledge is a big plus for support personnel.

ernatively contracting for support. Universities can use graduate students for

some tasks. Well-proven templates can reduce the support time
support time. High-end features such as video components r
multi-media modules.

5. Student support.
experience poor network performance. An increasing number of
number lag behind.

Implications: Technical literacy and computer/internet skill cour
poses special challenges as noted above. A 24x7 high-quality he
covering a broad-range of products. No outside vendor can
considered. Some of us believe that the need for a 24x7 technic
that there is less need given the number of students who are en
who do not have a lot of technical questions. This

6. Innovation and experimentation. Effective models of delivery are
rapid adaptation. Innovation and experimentation should be enco

Implications: Avoid an overly centralized, one-size-fits all a
instruction and distance education instruction. Be creative i
assessment of the effectiveness of technology should be part o
service would provide feedback as to the performance of the co
could serve to "steer" the activity in appropriate directions in the

7. Standards. Standards for interoperability and reuse of content are
Consortium and others to make it easier for information and tran
learning platforms. As organizations continue to seek alliances a
a high-degree of interoperability using common standards.

Implications: In the future, a common product will be much
increasing connectedness of organizations and the increasing s
challenges of providing sophisticated interoperability of systems
the same time, for reasons related to TCO, it is important to cho
products with standard interfaces can often be b

Implications: Clearly, solving the transportability issue is a pr
choose products and encourage features with this in mind. We

required. Access to re-useable course components or modules can reduce equire a higher degree of support and are more costly than lower-end

students are entering institutions with technical skills but a significant

ses are important and need to be offered. Offering such courses at distance p desk would be valuable. The help desk must be able to answer questions provide cost-effective full service but outsourced help-desks should be al help desk is essential and will be a need for a long time. Others believe gaged in distance education courses without this kind of 24x7 support and is a key service that continues to be a challenge to provide.

continuing to evolve. We are in an early stage of implementation with uraged. They improve the quality of learning.

pproach. Take advantage of developments already in place in resident integrating services across different platforms and organizations. An f the effort, including, at a minimum, satisfaction surveys of users. This ompany as well as the effectiveness of various learning technologies. This future.

in nascent phases but evolving. Significant work is being done by the IMS sactions to be shared among different products and over a network of nd partnerships, it becomes increasingly important to use systems that have

less important for managing TCO, Total Cost of Ownership. Given the ndication of information products and services, enterprises are facing the . Dynamic interfacing different systems will become more of the norm. At ose a small number of standards for product selection. A few wisely chosen etter than one, large monolithic product from one vendor.

oblem that rests solely with the vendors. However, we as purchasers must must seek products that comply with common standards; and seek vendors

committed to adapting their product to meet emerging standards. Su
accordingly.

8. Best of breed. Faculty does not want to use more than one product (t
faculty want to use the product that is best suited to their discipline, t

Implications: Best of breed products with a high degree of interopera

9. Conversion costs.
It depends on how much content was developed using standard Web

Implications: With foresight, course content can be developed with
one CMS can be converted and reused in another CMS product. Gu
follow them.

10. Middleware not ready. Institutions and software vendors do not have
encryption. In general, the so-called middleware layers are in state of
interoperability and peer-to-peer information exchange.

Implications: The lack of robust middleware will continue to impede
the answer given the need for interoperability between many other sy

11. Home institution still vital. Many essential services for students are b
services such as registration and financial aid; and student academic
These services use IT systems and institutional processes and policie

Implications: The amount of effort to integrate with our existing
formats should be defined to facilitate exchanging data between insti
catalog and other services.

12. Portals – concept or product? Portals can provide a degree of user co
a large enterprise. Rather, organizations are likely to use multiple por
the end-user better. Some examples of portals include Campus Pipeli
the portal for WebCT CMS. Blackboard Inc. has its own portal. Peop
PeopleSoft promises integration with vendors such as Blackboard an
general portal products such as Yahoo!'s new portal product for busi
"pushing" information to end-users. Promises of services such as "sir

h vendors must have the resources and ability to evolve their products

minimize learning time and increase overall effectiveness). But,
eaching style, and their student needs.

bility will be optimal for large institutions.

tools, following standards.

the intent to use it in different CMS products. Courses developed for
idelines and standards should be developed and faculty encouraged to

common solutions for access authorization, directory services, or
development and flux. The middleware is essential for good

the development of a broad range of services. A central solution is not
stems.

ased at their home institution. These include student administrative
ervices such as advising, career counseling, and library services.
.

back-end databases will be significant. Standard interfaces and data
tutional based systems and the common platform housing the common

nsistency and integration. No one portal product will serve the needs of
tal products and services, with the onus of tying them together to serve
ne as a portal to the SCT SIS products. Campus Pipeline is likely to be
leSoft has a portal service to provide Web services for SIS and HR.
d WebCT. There are other higher education portal products as well as
nesses. Portals are useful for integration, for personalization, and for
gle sign-on" need to be taken with a grain of salt. Portals that are

implemented to provide personalized services to individuals require
this database for the over 4 million citizens in Colorado is huge and

Implications: Portals are another integration issue. An off-the-shelf
solution must integrate with other services and portals su

13. Aggregate procurement through statewide contracts for hardware an
applied and extended to course development software, CMS, and ser

Implication: An RFP that addresses the common platform referen
WebCT and Blackboard, used both in resident instruction and for
scale and a statewide purchasing mechanism for these products, and
with a view of providing statewide solutions for all electronic learni
non-resident instruction.

14. High availability and performance (24x7). Given work habits of both
per day, 7 days per week. Given the critical nature of the application
availability and performance. The goal for availability should be at l
educators evolve to incorporating advanced multimedia, such as aud
simultaneous streams of high capacity downloads.

Implication: The costs of high availability servers is greater than
provide 24x7 services (both hardware and personnel). To provide
automatically mirrored on servers at the Front Range GigaPoP th
funds and ongoing funds for maintenance, support and replacement.

Implication: Consolidation of institutional data centers may be des
scale. An outside service vendor should be considered for hosting
generic solution and tailored solutions required by faculty and stude

15. Accessibility.
of The Rehabilitation Act (amended 1992), and The Telecommunica
information must be accessible by individuals with disabilities. In ac
electronic information must be accessible by individuals with visual
16. Migration principle. Many of the services and technology tools are n
cooperative or institutional) and that they may migrate between leve
as part of a cooperative effort, but as its usage increases or the cost a

a user login and password. The issue of who maintains and supports unresolved.

portal package will not be robust enough for all needs. The proposed ch as that of the Colorado Institution of Technology (CIT).

d software. The success of the statewide contracts for PC/LAN's can be ver platforms.

ced above should be expanded to include existing platforms, such as distance learning. This would provide the advantage of economies of maybe services as well. In other words, the RFP should be constructed ng courseware and services used by all institutions for both resident and

faculty and students, the system needs to be available almost 24 hours it is important that the solution be of high quality, both in terms of east 99.99% (i.e. unavailable no more than 1 hour per year). Also, as io and video streaming, it is important that the system support multiple,

non-mission critical servers. Small institutions will be challenged to both redundancy and good local performance, the content could be state hub for high-speed network access. This would require capital

irable up to some level to achieve high availability and economies of 24x7 services. Care must be taken to consider the tradeoffs between a nts.

tions Act of 1996 (section 255), that mandate that all electronic dition, State of Colorado in House Bill 00-1269 mandates that disabilities.
ot going to be permanently part of any level of platform (common, ls. For example, some leading edge technology may initially be shared nd skill requirements of managing it decreases, it may be more cost

efficient to move it to an institution or common platform model.

Implications: It is critical to create organizational mechanisms

Recommendations

Course Development Tools

1. Establish a state purchasing price agreement, or other suitable contra
of estimated usage levels from all higher education, and possibly K-
separate from state agency pricing. Provide a financial incentive in t
the cost of the software if purchased through the price agreement. Re
rate far exceeding the cost of software acquisition. Provide institutio
identify a subset of the list that they will support, based on their own
and Web server systems) and their ability to provide technical and in
support institutional requests for additional funding for additional su
2. Work with the distance education providers and appropriate IT orga
user forums for the selected authoring tools.
3. Sponsor a semiannual Web Authoring user group conference that wo
facilitate discussions of common problems and sharing of common s
tool training suggested above, and provide an opportunity for users a
list and provide input for its evolution.
4. Create a process through which statewide participation in projects su
that academic faculty from a range of institutions be involved in, and
5. Consider statewide participation in the Merlot project, and statewide
6. Sponsor the development and operation of an online repository for d
components in formats supported by the Web authoring components
delivered and on-campus courses.

a. Create incentive programs for faculty and institutions - through intel
components for, and contribute them to, the repository.
b. Have faculty lead the policy aspects of the repository related to the c
c. License content from other sources where appropriate to make avail
d. Encourage faculty and institutions to use content from the repository

Course Management Systems

which can permit SST's to move between different platform levels.

ctual arrangement with authoring software vendors, based on a survey
2, institutions in Colorado. Education pricing should be sought
e form of a subsidy by funding a significant fraction (25% or 33%) of
cognize that institutions will be incurring increased support costs at a
nal flexibility by allowing the central IT provider at each institution to
assessments of technological impacts (e.g. to the institution's network
structional support to application users. Expect and be prepared to
pport staff.
izations at each institution to create statewide training programs and

uld include presentations about Web authoring experiences, and
olutions. The user group conference could also include the authoring
nd technical support professionals to revisit the recommended software

ch as Merlot are considered and adopted if appropriate. It is important
take ownership for, decisions to participate in such projects.
participation in similar types of projects that exist or may emerge.
igital content, modules, graphic and visual elements, and audio
which can be used by faculty at all institutions for both distance

lectual property policies and management, and other means - to develop

ontribution of materials.
ble in the repository.

1. A single
for the existence of our taskforce we believe it is important that we st
Colorado and the subsequent variety in administrative support system
effective way is vital. We would acknowledge that most of the leadin
support and that is to our advantage as each campus or system is look
2. An RFP should be issued to solicit price bids for the major categories
institutions are often able to negotiate more favorable prices than thos
the cost of issuing the RFP can exceed cost savings. However, we bel
would have to pay, will enable the state to exert some influence on fe
balance an RFP would stand a reasonable chance of reducing costs.

The RFP should include:

- Developmental Features
- Instructor Tools
- Instructional Features
- Student Features
- Administrator tools
- Administrative Features
- Technical Support
- Software Costs
- Hardware Requirements

3. An inter-institutional taskforce should be established to evaluate curr
instructional materials ("objects") that could be used in any standards
Education and CIO committees on the status of these standards and w
and reduce course development costs. Another challenge to be addres
of intellectual property. Although case law is just now being develop
DMCA, the Digital Millennium Copyright Act, ECPA, the Electronic
laws impacting use and distribution of instructional materials such as
4. Proactive and cooperative steps should be taken to help campuses pr
education. These include:

- Analysis of and recommendations for the integration of CMS with ca
CMS will be significantly effected by their ability to integrate with ot
institutions that use the same CMS and or student information systen
those of any single institution.

ate this unequivocally. Knowing the diversity of higher education in
s, selecting a CMS that integrates and expands services in the most
g CMS products will have multiple system and operating system
ing at 'enterprise wide' solutions.
of CMS products and services. We recognize that individual
e found in state agreements of this kind (and may still do so), and that
ieve an RFP would lower the ceiling price any public institution
atures and services we believe these products should offer, and on

ent national initiatives to develop technical standards for producing
-compliant CMS. This taskforce should report to CCHE's Distance
hether the adoption of any would encourage sharing of course content
s by this taskforce and/or other groups will be the fair use and sharing
ed, UCITA, the Uniform Computer Information Transactions Act,
Communications Privacy Act; have all been updated or revised with
objects.
epare for emerging developments in CMS and the delivery of online

mpus information systems. The full usefulness and functionality of
her campus information systems. Cooperation on this issue among
s should be able to bring resources to bear on the problem beyond

- Experimentation with shared administration, faculty training, and suppo
institutions within the same governing board should help determine wha
through Cooperative Platforms rather than Institutional Platforms.
- Both CMS/Campus Information System Integration, and the evaluation
be advanced by a state funded RFP for groups of institutions to propose

Portal

1. Consider being part of the new State Portal for providing certain functio
is an excellent example. Institutions should continue to develop their ex
and to serve their constituency. The common Distance Education Portal

a. Catalog Schedule of courses and programs
b. "Consumer" information on distance education (Info specific to Colora
education)
c. A comprehensive list of higher education institutions with links to their
d. A "getting started" guide providing information on technology and skill
e. Latest versions of software "plugins" commonly used in online educatio
f. A calendar of online educational and cultural activities available for fre
g. Time and Travel Expense Calculator to enable students to calculate wh
h. Online Suggestion box on how services, offerings, etc. can be improve

2. Additional functions should be considered at a later time by the CAO a

a. Market research activities aimed at Colorado, National and Global Ma
b. Marketing/advertising activities aimed at Colorado, National and Glob
c. Statewide RFP process for permissive purchasing of SST's
d. Standards that promote the portability or conversion of content betwee
e. A database of sharable instructional components, learning modules, fo
f. Coordinating service staff
g. Links to Job Search Services
h. A student ombudsman service to help resolve potential conflicts

Advanced Technology (Specialized video and media servers)

A statewide working group should be formed to address the issue of share
this document, and make appropriate changes in it. The second task for thi

t services among institutions that use the same CMS, or among
t eventual advantages, if any, can be gained by providing CMS

of the effectiveness and efficiency of Cooperative Platforms could
such cooperative initiatives.

ns of widespread interest. The common catalog described elsewhere
isting portal and Web pages to maintain their distinctive identify
should have the following features:

lo institutions as well as general info on quality of distance

home Web site.
s required for successful use of distance education courses.
n.
e to Colorado citizens.
at they'd save in travel time/costs in distance education.
l.

nd CFO groups. They might include:

kets
al Markets

n different development tools and delivery systems.
lowing the Project Merlot model

d central services. This group, as a first assignment, should consider
s group might be to address the possibility of some shared technology

specifically to support distance learning. However, as stated above, "the recommendation for shared central services, unless and until there are centr light, perhaps the first task would be to form a central, statewide group

Turn-Key Services and External Service Providers

1. Institutions should decide how to use these services to complement the needs.
2. An RFP should be issued to solicit price bids from at least two winning believe an RFP would lower the ceiling price any public institution wo features and services we believe these products should offer, and on ba
3. RFP's should be developed for two categories of services: (1) full serv (2) Web hosting of course content developed and offered by institution
4. Any turn-key service must give individual faculty members direct acce learning outcomes are best accomplished when faculty can tailor cours

Back-end Student Administrative Service Systems

1. Institutions will be responsible for integrating their CMS and SIS. Star institutions, the common platform, and external service providers.
2. As the Academic Council works on further developing articulation agr possibility of providing students with a degree planning tool that can b would allow students to plan for a degree when considering course off
3. The institutions' SIS will serve as systems of record for student matric billing, and financial aid for the student's home institution.
4. As the program plan for expansion of distance education is further def service functions for non-degree students and non-credit programs. Th

Other Technology Related Recommendations

1. Consider joining the IMS Consortium in developing interoperab components.
2. Develop guidelines that would minimize the cost of conversion of cou

Recommended Short Term Next Steps

1.

massive amount of support required prevents us from making any
al support services to buttress central hardware and software." In this
o address support services, both central and local support services.

ir course offerings and supplement their resources based on their

g vendors. The resulting contracts would be non-exclusive. We
uld have to pay, will enable the state to exert some influence on
lance an RFP would stand a reasonable chance of reducing costs.
ice, including support for developing and converting course content;
s, and (3) 24x7 support.
ss for making small adjustments in course materials. Successful
e content to their teaching style and their students' needs.

dard file formats should be developed for exchanging data between

eements for transfer courses, attention should be given to the
e applied between cooperating institutions. Should a planning tool
erings from multiple institutions.
ulation, registration and academic records, tuition calculation and

ined, consideration will be given to providing common student
ese functions would include registration and billing.

ility standards for course management systems and other online

rse content between systems.

Determine the appropriate forums for coordinating future work.

2. Proceed with developing the recommended RFP's for software and h
a small number of winning vendors. Institutions would be allowed to
discounts and costs savings should be realized through aggregated, S
objectives and specifications before the RFP's can be completed.
3. Determine the best strategic alignment of higher education with the r
the new DECC.

Funding Requirements

Without more definition of program goals and objectives, specific fu
components beyond the common catalog. Unit costs have been identified

The finance taskforce has developed a high-level funding model that addr

Common Platform Taskforce Participants

- David Makowski, Assistant Vice President, University Management
- Patrick Burns, Director of Academic Computing and Network Servic
- Frank Edlin, Director, Computing Information and Network Services
- Gary Hatch, Assistant Vice President, Information Technology, Univ
- Thomas Maher, Director of OIS, Colorado State University
- James Marshall, Director User Support, Information technology Serv
- Jay Martin, Assistant Vice President, Academic Computing & Techn
- Mollie McGill, Assistant to the Associate Vice President, University
- Robert Tolsma, Executive Director, CU-Denver Online & Distance
- Don Williamson, Associate Vice President for Computing and Infor
- Derek Wilson, Director, Computing Center, Colorado School of Min

COMMON PLATFORM
Course Management Systems (CM

Introduction

CMS's, or LMS's (Learning Management Systems) as they are sometim
assist teachers and administrators with the delivery of online education.
organize and present course content, provide communications for studen

ardware. These RFP's would lead to awarding State-wide contracts to
purchase software and hardware off of the price agreements. Volume
tate-wide purchases. We will need a fuller understanding of program

ew State portal. Make this a key item for the CCHE CIO Council and

nding requirements cannot be provided at this time for technology
in each section where appropriate. This will be useful in future work.

esses the costs of new technology investments or support costs.

Systems, University of Colorado System (Chair)
es, Colorado State University
s, University of Colorado at Denver
ersity of Northern Colorado

ices, University of Colorado at Boulder
nical Services, Metropolitan State College
of Colorado System
Learning, University of Colorado at Denver
mation Technology, CCOES
es

TASKFORCE REPORT
IS) Subgroup Recommendations

es called, are software programs and information systems designed to
While products in this category vary widely, they typically are used to
nt-faculty and student-student interaction, and offer a variety of course

management tools such as calendars and gradebooks. Most higher educati
to both supplement on-campus classes and as part of distance education de
interface.

This product category includes many new vendors and products and is gr
100 vendors (C. Aldrich, Research Note Com-11-6673). Some changes of

1. Most educationally oriented CMS's started as "stand-alone" applicatio
electronic content (e.g., CD-ROM, e-books, and electronic versions o
has developed, vendors have adopted strategies to link their products
partnerships with content publishers to develop academic material tha
are also developing or partnering with developers of campus "portals"
become but one integrated part of a much larger Web-based campus i
2. Revenue models employed by these vendors are becoming more comp
annual licensing fees, ASP models, transaction fees, and even adverti
vendor.
3. Expansion of product lines and services: Single products are being de
capacity, ability to be customized and price. Many vendors are also ex
some cases unbundling previously bundled services so that institution
including Web-hosting, training, custom software programming, plan
services.

Purpose

The purpose of this report is to answer the following questions in light of
online distance education.

1. Should CMS's be part of a common state platform, cooperative platfo
2. Should an RFP be issued for the purchase of CMS(s) by public highe
3. Should any "standards" be adopted regarding the use of CMS's by pu
4. Are there other state actions that could be taken regarding CMS's to i
education?

Discussion

The recommendations we make in this report rest in part on our firm
technologies developed within an industry that is facing great change and

on institutions use at least one CMS, some use several. They are used
ivery systems. Almost all products now use a Web-browser as its user

owing and changing very fast. The Gartner Group has identified over
note are the following:

ns with few connections to existing campus information systems or
textbooks, course guides and test banks). As this product category
o existing campus information systems and are developing
t can be imported into and managed by the CMS. Most CMS vendors
(discussed elsewhere in this document) and in those cases CMSs
nformation system used by all students, faculty, staff and even alumni.
plex, and some offer multiple pricing schemes. One-time licensing,
ing revenue models are appearing, sometimes offered the same

veloped into multiple or tiered products differentiated by features,
panding the range of services they offer in support of CMS, and in
s can select those they need. Services offered cover a wide range,
ning, evaluation, marketing, 24/7 help desk, and course developing

our understanding of role CMS can play in improving distributed and

rms, or institutional platforms?
education institutions?
blic institutions of higher education?
mprove the efficient and effective use of these tools in online

belief that course management systems are valuable but immature
likely consolidation within the next few years. None of these products

has emerged as a standard, none fits every instructional need, their produ
with each new product release they continue to add functionality and
product field "the useful life of any LMS purchase is, in most c
Recommendation 1 (below) follows from our belief that at this point in
continue to test, pilot, and deploy products, monitor the software standar
this product category. During this volatile period, an RFP to establish
sense, and where it is possible to aggregate the purchasing power of the h

We also considered the argument that making a CMS part of the commo
students to use. It is our belief that this virtue is not as important as mig
have learned to navigate through many different interfaces. Moreover,
emphasize the value of interfaces that the user or instructor can customiz
uniform interface. In fact, almost every CMS vender is promising to giv
their CMS product in the future. In those circumstances, creating a
technological difficulties and likely user resistance if it were attempted.

Recommendations

Our answers to the questions we posed in the purpose s

1. A single
   for the existence of our taskforce we believe it is important that we b
   recommendation. Given the diversity of higher education in Colorad
   selecting a CMS that integrates and expands services in the most eff
   information systems on the home campus than it is that different inst
2. An RFP should be issued to solicit price bids for the major categorie
   institutions are often able to negotiate more favorable prices than thc
   the cost of issuing the RFP can exceed cost savings. However, we be
   would have to pay, will enable the state to exert some influence on f
   balance an RFP would stand a reasonable chance of reducing costs.

   The RFP should include:

- Developmental Features
- Instructor Tools
- Instructional Features
- Student Features

ct development cycles are often shorter than our decision timelines, and eapfrog their competitors. Gartner finds that because of this shifting ses, only two years." (C. Aldrich, Research Note Com-11-6673). ime it seems necessary and prudent to permit individual institutions to ls that emerge, and allow larger market forces to bring greater clarity to nore favorable pricing for all CMS products seems to make the most gher education community it could benefit institutions

n platform would provide a common interface that would be easier for ht first appear. Students currently use the Web for many purposes and current trends in both interface development and instructional design e to their individual preferences and purposes over the value of a single e the instructor and/or user greater control over the "look and feel" of uniform user interface on a state-wide basis would face significant

tatement above are summarized in these recommendations .

egin our recommendations with this unequivocal and unanimous o and the subsequent variety in administrative support systems, ective way is vital. It is more important that a CMS integrates with the itutions use the same CMS.

s of CMS products and services. We recognize that individual se found in state agreements of this kind (and may still do so), and that lieve an RFP would lower the ceiling price any public institution eatures and services we believe these products should offer, and on

- Administrator tools
- Administrative Features
- Technical Support
- Software Costs
- Hardware Requirements

3. An inter-institutional taskforce should be established to evaluate cur
instructional materials ("objects") that could be used in any standard
Education and CIO committees on the status of these standards and
and reduce course development costs. Another challenge to be addre
of intellectual property. Although case law is just now being develop
DMCA, the Digital Millennium Copyright Act, ECPA, the Electroni
laws impacting use and distribution of instructional materials such a
4. Proactive and cooperative steps should be taken to help campuses pr
education. These include:

a. Analysis of and recommendations for the integration of CMS with c
CMS will be significantly effected by their ability to integrate with o
institutions that use the same CMS and or student information syste
those of any single institution.
b. Experimentation with shared administration, faculty training, and su
institutions within the same governing board should help determine
through Cooperative Platforms rather than Institutional Platforms.

Both CMS/Campus Information System Integration, and the evaluation
advanced by a state funded RFP for groups of institutions to propose such

COMMON PLATFORM
Web Authoring Tools Sub

Introduction

New technologies are allowing faculty to develop, assemble, and delive
desire to create a course which draws upon the best materials for a sp
suitable to the style of a given instructor *and* the needs of his or her
technologies. In the past, supplemental course materials were typically li
publishers. These materials were typically edited and peer reviewed lo

ent national initiatives to develop technical standards for producing
s-compliant CMS. This taskforce should report to CCHE's Distance
whether the adoption of any would encourage sharing of course content
ss by this taskforce and/or other groups will be the fair use and sharing
ed, UCITA, the Uniform Computer Information Transactions Act,
c Communications Privacy Act; have all been updated or revised with
s objects.
epare for emerging developments in CMS and the delivery of online

ampus information systems. The full usefulness and functionality of
ther campus information systems. Cooperation on this issue among
ns should be able to bring resources to bear on the problem beyond

pport services among institutions that use the same CMS, or among
what eventual advantages, if any, can be gained by providing CMS

of the effectiveness and efficiency of Cooperative Platforms could be
cooperative initiatives.

TASKFORCE REPORT
group Recommendations

r course content in ways not imagined just a few short years ago. The
ecific set of topics and assemble and deliver it in a customized way -
individual students - has the potential to be realized with these new
nited to textbooks, workbooks, and other forms of material produced by
g before publication. Courses were often organized around a specific

textbook. To develop a given course, a faculty member might select a
supplement it with other appropriate material, much of which might be de

While there is increasing availability of "online content," much of it is
course content, little has been edited by someone other than the author
content material, although some efforts such as the Merlot project are u
faculty and some student populations. Existing technologies are evolving
technology and creating yet more choices. Further complicating the pict
property rights and management. These issues, plus the desire of faculty
create an understandable concern among teaching professionals. Many t
development of, content for technology-based delivery. Sometimes this is
doesn't exist.

Since faculty, and those who help them assemble resource materials and
for the Web and other technology-based delivery methods, the members
suite of software tools for Web authoring. These tools could be used by
and technology-enhanced courses), to create or adapt course material and

- CCHE should investigate the feasibility and desirability of establishi
or all education), for a suite of software tools for Web page authorin
and audio. More than one software tool of each type should be includ
levels of need and expertise.
- Financial and training incentives should be developed and implement
recommended software tools that become part of the "common platfo
- CCHE should coordinate a Web authoring user group forum that wou
assemble on a regular basis to discuss common problems and share c
coordination of other affinity groups related to distance delivered and
- The development and operation of a repository for digital course mod
appropriate, to facilitate the sharing of digital content among faculty

Price Agreements And Potential Software Tools

Mandatory use of specific software applications is not appropriate but p
standard set of protocols and applications. The authoring tools subgroup
considered for inclusion in a state price agreement. Since some of these
least annually, and price agreements should be flexible enough to accomm

textbook from a set of those available which cover the topic, and eloped by the instructor.

not modularized in ways that are useful to assemble into customized and most has not been peer reviewed. There is a lack of this type of nderway. In addition, technological proficiency varies widely among rapidly and new technologies are even replacing recently implemented ure is a lack of clarity and understanding with respect to intellectual o have exactly the right resource material available for their students, herefore conclude that they need to personally create, or oversee the to assure quality, but other times it is because the appropriate content

content, will be increasingly developing resource modules and content of the Web authoring subgroup believe it is appropriate to identify a faculty (and instructional support staff involved in distance-delivered content. The general recommendations of the subgroup are as follows:

g a state price agreement, (or price agreements exclusively for higher g, graphics (including photographic editing and authoring) and video ed in the price agreement to accommodate different feature sets and

ed for distance education faculty that will enable them to use the rm."
ld allow application users and technical support professionals to ommon solutions. It may also be appropriate to lead the formation and technology enhanced offerings.
dules and materials should be studied, and funded and implemented, if and across institutions within Colorado.

rice agreements can be used to encourage faculty to migrate toward a recommends that the software applications listed in the table below be applications continue to evolve rapidly, this list should be reviewed at odate necessary changes.

Product	1 Anticipated Use	List/ Unit	Curr Avail Best / Educ $ per Unit	3 Annual Cost of Ownership per Unit
Adobe Photoshop	Medium	$609	$299	High
Adobe Illustrator	Medium	$399	$ 99	Moderate
Adobe Pagemaker	Medium	$499	$289	High
Adobe Acrobat	High	$249	$ 99	Moderate
Adobe Publishing Collection (combo of above 4 products)		$999	$499	High
Adobe Premiere	Low	$549	$349	High
Macromedia Dreamweaver	High	$299	$ 75	Moderate
Macromedia Fireworks	Medium	$199	$ 75	Moderate
Dreamweaver Fireworks Studio (combo of above 2 products)			$149	Moderate
Dreamweaver Web Studio (Flash, Dreamweaver, Fireworks, Freehand)			$200	Moderate
Macromedia CourseBuilder (Dreamweaver add on)	High		$ 69	Moderat
Macromedia Flash	Medium	$399	$ 99	High
Macromedia Director	Low	$699	$349	High
Microsoft Frontpage	High	$150	$28.59	High
Microsoft PhotoDraw	High	$110	$21.78	High
Microsoft Frontpage w PhotoDraw		$200	$50.37	High
Netscape Composer	High	Free	Free	Low

Additional Discounting?
Probable
Probable
Probable
Probable
Probable
Maybe
Maybe
Maybe
Maybe
Maybe
Maybe
Unlikely[2]
Unlikely[2]
Unlikely[2]
N/A (Free)

Quicktime Pro	Medium	$ 30	$ 30	Moderate
Real Producer	Low	$149		High
Apple Final Cut Pro	Low	$999	$499	High
Apple imovie	Low	$ 49		Moderate

[1] Low = probably < 200 units statewide; Medium = pro

[2] State price agreement already exists (Microsoft Select); Other higher

[3] Cost of ownership range based mostly on type and complexity of pro

These tools were identified based on the following criteria:

- They represent *de facto* standards in the sense that they are products m and end users to develop digital content components at the subgroups' issuing any RFP.
- They require a range of prerequisite knowledge from little or none to e
- They represent a tradeoff between ease of use and capabilities.
- They represent a range of intended uses from simple Web page creatio
- Most (though not all) are platform independent in the sense that versio users have fewer choices, but we believe this is not currently a major i

It should be noted that there might be significant valid technical concerns bandwidth intensive, others perform better with various server platform training and technical assistance be provided. Thus, the need for flexibili important to note that other products may offer different feature sets more a

Incentives, User Groups, Repository

We recommend the following, regardless of what software might be includ

1. Establish a state purchasing price agreement or other suitable contract of estimated usage levels from all higher education (and possibly K-12 separate from state agency pricing. Provide a financial incentive in the the cost of the software if purchased through the price agreement. Rec rate far exceeding the cost of software acquisition. Provide institution identify a subset of the list that they will support based on their own a

Unlikely
Maybe
Unlikely
Unlikely

bably 500 1200 units; High = probably > 1200 units
education agreements possible
duct.

ost commonly used by both instructional technology support staff
institutions. A more thorough discussion should occur prior to

xtensive;

n to multimedia graphics, animation, photography, audio and video.
ns are available for both Mac and Windows-based systems. UNIX
ssue for most distance education faculty.

related to supporting some of the tools on the list. Some are highly
s and network operating systems, and some require that extensive
y at the institutional level is extremely important. Furthermore, it is
pplicable to certain disciplines.

ed in a price agreement:

ual arrangement with authoring software vendors, based on a survey
), institutions in Colorado. Education pricing should be sought
form of a subsidy by funding a significant fraction (25% or 33%) of
ognize that institutions will be incurring increased support costs at a
l flexibility. Allow the central IT provider at each institution to
ssessments of technological impacts (e.g. to the institution's network

and Web server systems), and their ability to provide technical and in
support institutional requests for additional funding for additional su

2. Work with the distance education providers and appropriate IT organ
user forums for the selected authoring tools.
3. Sponsor a semiannual Web Authoring user group conference that wo
facilitate discussions of common problems and sharing of common s
tool training suggested above, and provide an opportunity for users a
list and provide input for its evolution.
4. Create a process through which statewide participation in projects su
that academic faculty from a range of institutions be involved in, and
5. Sponsor the development and operation of an online repository for di
components in formats supported by the Web authoring components
distance delivered and on-campus courses.

a. Create incentive programs for faculty and institutions - through intell
components for, and contribute them to, the repository.
b. Have faculty lead the policy aspects of the repository related to the co
c. License content from other sources where appropriate to make availa
d. Encourage faculty and institutions to use content from the repository

COMMON PLATFORM
Turn-Key Services Subgr

Another alternative for providing distance education would be to con
contributions by Rowe, A., 2000 Draft RFP evaluation matrix, npublishe
institutions currently spend approximately $1.2 million a year on the
summarizing data collected from the institutions for Academic Year 1999

nstructional support to application users. Expect and be prepared to
pport staff.
ızations at each institution to create statewide training programs and

uld include presentations about Web authoring experiences, and
olutions. The user group conference could also include the authoring
nd technical support professionals to revisit the recommended software

ch as Merlot are considered and adopted if appropriate. It is important
take ownership for, decisions to participate in such projects.
gital content, modules, graphic and visual elements, and audio
The repository would be used by faculty at all institutions for both

ectual property policies and management, and other means - to develop

ontribution of materials.
ble in the repository.

TASKFORCE REPORT
roup Recommendations

tract with a vendor for turn-key distance education services. [Major
d document, Metropolitan State College of Denver.] In fact, Colorado
se services as is shown in the following table prepared by CCHE
-2000:

DISTANCE EDUCATION OUTSOURCING
AY 99/00

TOTALS	Students = 12,040	$1,298,290
e-College	**6,020**	**$592,080**
All CCs	3,804	$218,240
UCD CU Online	1,190	$256,480
UCHSC/Nontrad PharmD	218	$17,440
CU Independent Learning B2	49	$3,920
CSM		$21,000
UNC	1,875	$75,000
JonesKnowledge.com (e-education)	**5,263**	**$536,952**
Arapahoe Community College		$21,935
UCHSC/SON Informatics	56	$1,960
UCHSC/Pharm Cont. Ed		$3,000
UCCS/B School MBA	544	$281,552
Fort Lewis	4,276	$27,045
Metropolitan State College of Denv	387	$201,460
WestNet	**757**	**$71,915**
Arapahoe Community College	757	$71,915
EMBANET Corporation		**$52,743**
CSU/B School		$52,743
WebCT		**$17,000**
FRCC, PCC, RRCC		$9,000
UCHSC/SON Informatics		$3,000
CSU Instructional Services		$3,000
CSU/Vet. Med		$2,000
Blackboard, Inc.		**$15,600**
Arapahoe & Pikes Peak CC		$9,600
UCD CU Online		$4,500
USC		$1,500
Independent Consultant		**$12,000**
UCHSC/PharmD		$12,000

The following suggests criteria for any Request for Proposal (RFP) for su
the complexity of providing such services.

Learner

These criteria should be evaluated in three dimensions: reliability, availabi

- Access to course material online
- Help Desk Service: by phone, by email, and online
- Exchanging Email: with instructor, with class, with sub-group of clas
- Posting and receiving threaded discussion messages (text, voice, and
  learners outside the class.

BEST COPY AVAILABL

ch turnkey services. The list is not exhaustive, but does help illustrate

lity, and response time.

s, with other learners outside the class.
video): with instructor, with class, with sub-group of class, with other

- Posting and receiving chat messages (text, voice, and video): with in the class.
- Access class standing online.
- Receive automated remedial feedback to tests and exercises online

Vendor

Determine the richness of support.

- Years of experience
- Hardware redundancy
- Network redundancy
- Fiscal stability
- Vision and ability to execute vision
- Staffing: network developers, support consultants
- System upgrades: frequency, predictability, and level of disruption
- Documentation (free or fee; online or in print): for students, for facu
- Offers development tools: Win98, WinNT, W2K, Linux, Mac OS
- Course development services
- Course conversion services
- Training (online, in person, or hard copy): students, faculty, designe
- Statistical analysis of grades
- Enrollment tools
- Course calendar
- Glossary
- Faculty profiles (text, image, audio, video)
- Student profiles (text, image, audio, video)
- Reporting services
- Disaster Recovery procedures

Course Developers

Support tools for the following

- Text
- Animation
- Video

structor, with class, with sub-group of class, with other learners outside

ty, for developers, for information technology support staff

s, course developers, administrators

- Audio
- Graphics
- Navigation between course elements
- Collaboration
- Tutorials

Costing

The Metropolitan State College of Denver pays the following

- $35 per student
- $500 for the licensing fee for a course
- $800 to take teacher input and put the course online
- $100 per hour to make custom changes to a course

COMMON PLATFORM
Advanced Techn

Background

This section addresses components of the common framework tha conceptualized in a relative sense, compared to the current state of learn "moving target." Mostly "early adopters" use advanced technology. Curre servers that are used to deliver delayed-video, 3) high-resolution video co

Advanced technology will likely play an increasingly promin

- Improve the quality of learning
- Engage students
- Meet the increasing expectations of students for access to advanced
- Increase our competitiveness relative to others that do not deploy ad infrastructure is generally excellent, providing a competitive advanta

Given the above positive attributes, deployment and effective utilizati students into our distance learning programs. Indeed, it is these additio fund central elements of the common framework.

fees (approximate) for a subset of the services listed above.

TASKFORCE REPORT
nology Servers

t provide advanced technology. Advanced technology should be
ing technology that is widely deployed at that time, and therefore is a
nt examples of advanced technology are 1) streaming media servers, 2)
nferencing devices, etc.

ent role in the delivery of distance education, as it can

echnology, and
vanced technology (this is particularly important because our
ge to public institutions of higher education in the state)

on of advanced technology may be a crucial strategy to attract more
nal enrollments that are necessary to provide the increased revenue to

Standards, Best Business Practices And TCO

The role of standards is very important when implementing any tech technology. First, low-level, well-recognized standards, such as TCP/IP observed strictly. Higher-level standards, such as at the level of the soft possible.

Best business practices for advanced technologies should also be followe disk drives, and implementing advanced technology in a partitioned management features. This latter aspect deserves discussion that will be deploy an entirely separate server and associated storage for streaming m unambiguously. In particular, this allows network traffic to be easily connected. It allows the use of storage to be assessed unambiguously. It planning purposes. Finally, as advanced technologies are often not matu will exert a minimum influence on the production environment.

Finally, it is often the case that other initiatives may be synergistic wit technology requires high-quality networking, and this is synergistic with t Such synergies and the opportunities they provide should be evaluated in ramifications.

Typical Phases Of Implementation Of New Technology

The phases of implementation for advanced technology are typically as campus to meet the needs of the early adopters on the campus. In the technology and the users are typically required. Such support is best ac isolate, identify and approach the problems. As the technology matures a state, then the technology may be able to be deployed centrally, i.e. remo state level in that it provides the opportunity for sites to explore and use best alternative for some smaller sites, even in the steady state, as such ag otherwise might not exist. Alternatively, "critical mass" may also exist on the best alternative, permitting closer contact with users while still ma deployment models will best serve the needs of the state

Issues

Many issues with the deployment of advanced technology exist. Some of

nology, but are especially important when implementing advanced
for transport, standard operating systems, etc., should be absolute and
vare application, are recommended and should be observed whenever

d. These include making the servers "bulletproof," redundancy, RADI
manner, separately from other technologies, to provide essential
framed in the context of a streaming media server. It is desirable to
edia as this will allow the resources used for this purpose to be tracked
and accurately metered at the switched port to which the server is
also allows the growth rate of usage to be tracked and projected for
e, it is prudent to deploy them separately so that problems with them

h the deployment of advanced technologies. For example, streaming
he Front Range GigaPoP and the state Multi-purpose Network (MNT).
TCO considerations, as they have implementation, support and budget

follows. Advanced technology is generally deployed on an individual
early phases of technology, significant support services for both the
complished in a face-to-face venue, as dialogue is usually required to
nd it becomes understood how much support is required in the steady
te from the users. Central deployment is an attractive alternative at the
the technology with a minimum of resources. Indeed, this may be the
gregation offers economy of scale and provides "critical mass" when it
individual campuses, with deployment on the individual campus being
intaining reasonable economies of scale. This, it is likely that both
to meet the diverse needs that exist in higher education.

these issues are enumerated below. Specific examples are provided in

the context of a streaming media server.

1. Need consensus from a working group – Whether deployment is on technology should only be done after a thorough investigation of opt accomplished by a working group of users and technical support per
2. Infrastructure – Advanced technology needs to be supported with ap redundant electrical power, UPS, a high-speed network connection, technology in a production environment), etc.
3. Quality versus quantity – It is often useful to address the issue of qu high-quality items preferred over a larger number of lower quality it media server, are multiple simultaneous streams of media at various all locations? An emerging consensus is that three qualities of outpu quality (e.g. MPEG-2 main profile, high spatial and temporal resolu

   connected via a medium-speed network (medium-speed WAN, e.g. small picture). As technology evolves and individuals become conn
4. Other technologies – Always an issue is how the advanced technolo to establish users' expectations. In the case of streaming media, for verses broadcast video? What is good enough? What is not?
5. Support – This is perhaps the most significant issue of all, as techno costs," where new technology is purchased, but no additional perso is worse than this, as resources are actually declining, requiring tech technology is very difficult to "glue together" to achieve the high-sp than ever before. Numerous examples arise in the case of streaming

   problems? Finally, the massive amount of support required prevents unless and until there are central support services to buttress central
6. Funding model – This applies more to funding ongoing costs than o new technology. Unfortunately, many of the ongoing costs are unkn reason for conducting a well-defined pilot project, with the determi In the case of a streaming media server, typical questions are severa support issues in item 5 above). How will the production of high qu software require update, and at what cost? How will faculty be rewa
7. Legal issues – Legal issues also exist. For example, who owns, oper client software required, that must be licensed? If so, can those licen computers are owned by others and not the University?

an individual campus or central, the decision to deploy advanced
ions and alternatives has occurred. In most cases, this will be
sonnel.
propriate infrastructure. Infrastructure requirements often include
redundant servers (especially as users come increasingly to rely on the

ality versus quantity. Stated otherwise, are a small number of
ems? Often the answer is "all of the above." In the case of a streaming
qualities needed to be able to provide streaming media availability to
t for streaming media are desirable for every content item: very high
ion, large picture) for access via a high-speed network (LAN or

T-1), and low quality (MPEG-4, low spatial and temporal resolution,
ected at higher speeds, these specifications will evolve.
gy compares with existing technologies, as existing technologies serve
example, what are the quality issues of streaming media on demand

logical environments have grown under the funding model of "one-time
nel are planned to support the new technology. Indeed, in some cases it
nologists to do "more with less." This is exacerbated in that modern
eed end to end performance that users expect, requiring more support
media. Who trains and supports the faculty to implement streaming

us from making any recommendation for shared central services,
hardware and software.
ne-time costs. Steady-state costs should be assessed when deploying
own and only determined approximately during the trial (this is a good
ation of ongoing support and costs as an outcome of the pilot project).
(many of these questions are embedded in the funding model for the
ality streaming media be funded? How often will the hardware and
rded financially for their efforts?
ates and maintains the application, including copyright issues? Is there
ses be enveloped under a site license, or is this an issue as those

Representative Example – Costs For A Streaming Media Server

To provide perspective, the one-time and ongoing costs of Cisco's IPTV
Note that these are based upon our very limited experience with this produ

1. Capitalization costs - $70,000. We estimate that this server will have
2. Annual Maintenance - $3,300 per year for software maintenance. No
was not purchased.
3. Storage costs – approximately $120 per hour of material at high qual
tape. Note the factor of 100!
4. Support staff – approximately $150,000. Four FTE's are dedicated pa
4 FTE will support less than a dozen faculty who will experiment wi
support will be required, but are relatively certain that significant sup
nature of interactions required.

Recommendations

A statewide working group should be formed to address the issue of sha
this document, and make appropriate changes in it. The second task for th
specifically to support distance learning. However, as stated above, "th
recommendation for shared central services, unless and until there are cer
light, perhaps the first task would be to form a central, statewide group

COMMON CATALOG
A Common Catalog Schedule

Vision: CCHE/CIO group intends to develop, deploy and support a Web-s
the 28 Colorado institutions of higher education. [Such a catalog exists at
exist in Wisconsin and California. Useful, but not particularly friendly, w
also, www.colorado.edu/cewww and www.cuonline.edu for examples of
wish to register for or to find more information on educational opportunit
of access to the information, the courses and the student services (registra
institutions. The Web-site will serve the residents of Colorado and the res

Rationale: The rationale for such a project includes the collection of inf
in a single location. Properly marketed, such a resource will increase pub
28 institutions of higher education in Colorado, create a resource for

streaming media server, purchased in June 2000, are provided below.
ct.

a two-year lifetime before it requires replacement.
e that this does not include the cost of hardware maintenance, which

ty. This is in contrast to about $1.20 for the cost of a video cassette

rt-time to this effort, each with management overhead. Initially, these
h this technology. At this time, we have little idea what long-term
port will be required for a small number of users, due to the intensive

red central services. This group, as a first assignment, should consider
is group might be to address the possibility of some shared technology
e massive amount of support required prevents us from making any
tral support services to buttress central hardware and software." In this
to address support services, both central and local support services.

TASKFORCE REPORT
for Colorado Online Education

ite providing a common catalog/schedule of online course offerings of
www.rlegu.org, serving 24 research universities across the US. Others
ww.gnacademy.org maintains a site, as does www.petersons.com. See
latabase-served catalogs.] Such a Web-site would allow persons who
es available via the World Wide Web. This will create a central source
ion, advising, admission, bookstore, library, etc.) available at the host
t of the world, putting Colorado online education "on the map."

rmation regarding the availability of online instructional opportunities
lic awareness of the large number of online instruction available at the
current and future Colorado students so that they can locate learning

opportunities to increase the range of choices available for meeting their
agencies for employee professional and continuing development, and crea
The opportunity for promoting Colorado education centrally should also i
in Colorado.

Specific benefits include making it easier to find online courses, providi
processes and student services available. In addition, organizations wou
training needs and facilitate the creation of customized programs to me
marketing channel for their courses. Colorado will gain improved edu
competitive.

Policy Recommendation

CCHE/CIO should contract with one or more institution(s) of higher learn
methodology, design, testing, deployment and documentation. Contracted

Policy Issues

CCHE/CIO and the institutions should develop a funding plan for the o
expectations need to be defined. Institutional responses to Web site inqui
institutional users and for students using site.

Common Catalog Taskforce Participants

- John Dunn, Director, Independent Learning Programs, University of
- Dave Makowski, Assistant VP University Management Systems, Uni
- Tom Maher, Associate Professor, Vice Provost, Colorado State Univ
- Don Williamson, Vice President for Information Technologies, **Colo**

Budget for Common Catalog of Online Instruction for Colorado

FY 00/01		---
ITEM	CAPITAL	
--	STATE	

goals, create a similar resource for business, industry and government
te an accessible site for the 'global' populations of potential students.
ncrease awareness of and access for unserved and underserved persons

ng information of programs and offerings, and describing enrollment
ld be able to find courses and programs suitable for their corporate
et training needs. The participating institutions will have a powerful
cational opportunities for the workforce and keep Colorado Online

ing to act as the coordinator for the project. Coordination will include
institution may also provide hosting.

ngoing maintenance of the Web-site/database. Institutional roles and
ries need to be defined. Help with technical and operational issues for

Colorado at Boulder (Chair)
versity of Colorado
ersity
rado Community College And Occupational Education System

--	--
OPERATIONS	--
STATE	--

	$ 50,000
Server/Software	
	--
Development	
Site Hosting	--
	--
Contingency	
	--
Marketing	
	$ 50,000
Total	
	--
Grand Total	
	--
FY 01/02	
	CAPITAL
ITEM	
--	STATE
	--
Server	
	--
Development	
	--
Site Hosting	
	--
Contingency	
	--
Marketing	
	$ -
Total	
	--
Grand Total	
	--
FY 02/03	
	CAPITAL
ITEM	

--	--
$ 40,000	--
$ 25,000	--
$ 10,000	--
$ 55,500	--
$ 130,500	--
--	$180,500
--	--
OPERATIONS	--
STATE	--
--	--
$ 20,000	--
$ 42,000	--
$ 10,000	--
$ 63,825	--
$ 135,825	--
--	$135,825
--	--
OPERATIONS	--

	STATE	
		--
Server		
	$ 20,000	
Development		
		--
Site Hosting		
		--
Contingency		
Marketing		--
	$ 20,000	
Total		
Grand Total		--

Budget assumptions

- Development costs may be shared with CIT
- Annual growth of enrollments (and institution contributions) calculat
- Budget administered by DECC.
- The budget model assumed here may be replaced as a final budget m
- These are preliminary estimates. As more information is provided, th
- These estimates are for establishment and development of a catalog V likely to be more costly.
- CU would be willing to host the site in the beginning but may decide entity for ongoing support.

ORGANIZATIONAL TA

Need for Coordination of State Higher Education Distance Education

The reapid growth of distance education offerings by Colorado institution of these can be met though individual institutional initiative. Others, howe institutions working together. However, the committee was unable to com coordination, or even in deciding whether certain issue areas even represe

STATE	--
--	--
--	--
$ 42,000	--
$ 10,000	--
$ 73,399	--
$ 125,399	--
--	$145,399

ed at 15 percent.

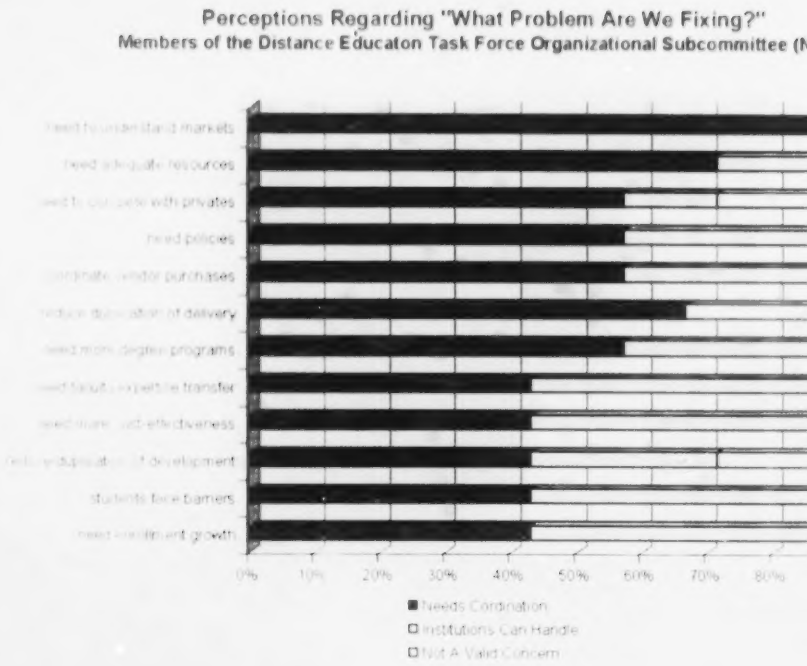
odel is developed.
e estimates might change.
Veb site. Additional services that might serve as a broader portal are

that it is in the best interest of site success to move the site to another

SKFORCE REPORT

Programs

of higher education poses many challenges and opportunities. Some
ver, may better be addressed through the coordinated efforts of all
e to consensus regarding which problems belong to what level of
t a valid problem to begin with.



Above is a table summarizing twelve potential problems and the comm
the committee is in true accord on is that we need a better understandin

= 7)

ttee consensus (or lack thereof) on each. To summarize, the only issue
of the markets to be served by distance education. On all other issues,

there is, roughly, a balanced "difference of opinion" on whether a given institutions. Finally, the issue of course duplication drew equal support a validity as a problem at all.

The possible "problems" to be solved are further defined

- Need to understand markets.
- Need for adequate resources. We don't have adequate resources (hu be a problem for everybody. Coordination might help define the nee development funds. Which is more critical?
- Need to compete with private providers. We can't compete with pri
- Need for statewide policies. In the view of CCHE, we lack statewid education-just-another-mode principle says, FTE policy should be s probably can be done through FTE policy review without special di
- Need to coordinate vendor purchases. We're not driving the best ba (CCHE). This seems to make sense to institutions if awards must b
- Need to reduce duplication in course delivery.
- Need for more, or for specific, degree programs online. The HB99- be offered via distance education at the community colleges. UCB, requirements for entire degrees when offering distance education co that are underserved with respect to the distance education option.
- Need for faculty technology expertise to transfer from distance to c
- Need of more cost-effectiveness. Distance education may not be co base to do, larger than any one institution can provide. It will take c marshal.
- Need to reduce duplication in course development. There is duplica subcommittee, and of the entire higher education taskforce, is that, through the degree approval process. Since one of the principles ad education are but two modes of delivery governed by the same aca program via distance education is an institutional choice if the prog general education core curriculum: if it falls within an institution's role and mission would support the choice to offer these courses at coordination across institutions.
- Need to reduce barriers faced by students. Students have too many institutions. This is a responsibility for each institution, but sharing barriers include:
- what's out there (we can do with common catalog or universal part

issue is appropriately dealt with through coordination or separately by
s one needing collaboration and equal support questioning its underlying

below, including some observations and positions on each:

man and financial) to sustain distance education growth. This seems to
d in order to get the resources. Needs include for personnel and for

vate, for-profit higher education distance education vendors.
e policies on distance education, including FTE. The distance
ame as traditional. But FTE policy needs to be made explicit. This
stance education coordination council.
gain we can with distance education vendors by buying separately
e permissive, not mandatory. CCHE management prefers mandatory.

1289 study reported a number of full degrees are offered or planned to
UCD, UCHSC, and CSU. The trend toward focusing on the course
urses is expected to continue. However, there may be certain markets

lassroom setting. UCD and others now actively exploit the linkage.
st-effective the way we do it now (CCHE). It may take large enrollment
apital to do as well, more than any one institution may be able to

tion of course development (CCHE). The consensus of the
duplication of higher education offerings is appropriately managed
opted by the taskforce is that distance education and traditional
demic role, mission and standards, the decision to offer, or not to offer, a
ram has already been approved by CCHE. This argument extends to the
role and mission to offer general education courses at all, then that same
a distance. However, there may be room for collaboration and

barriers to taking distance education courses from several Colorado
in survey and study costs could avoid duplication of effort. Some of the

cipation in national portals)

transfer and articulation (we can begin to address)
- tuition payment and financial aid (hard to do, institutions oppose tr
- student advocate (has been seen as a need in CCCOnline)
- Need to stimulate distance education enrollment. Enrollment is gro grew by 50 percent from last year to this year. The HB99-1289 stud academic year 1998 to 1999.

Purpose of DECC

The subcommittee developed the following purpose sta

Increase awareness, expand access, assure quality, and improve distance education by Colorado public institutions of higher educ competitively serve the needs of Colorado's citizens and economy.

Organizational Structure

A variety of organizational structures were examined. The preferred st directly to the council. This council would be comprised of representa councils of CCHE by meeting periodically with specified representative would get working input from the campuses in a variety of areas throu staff to carry out its assigned functions.

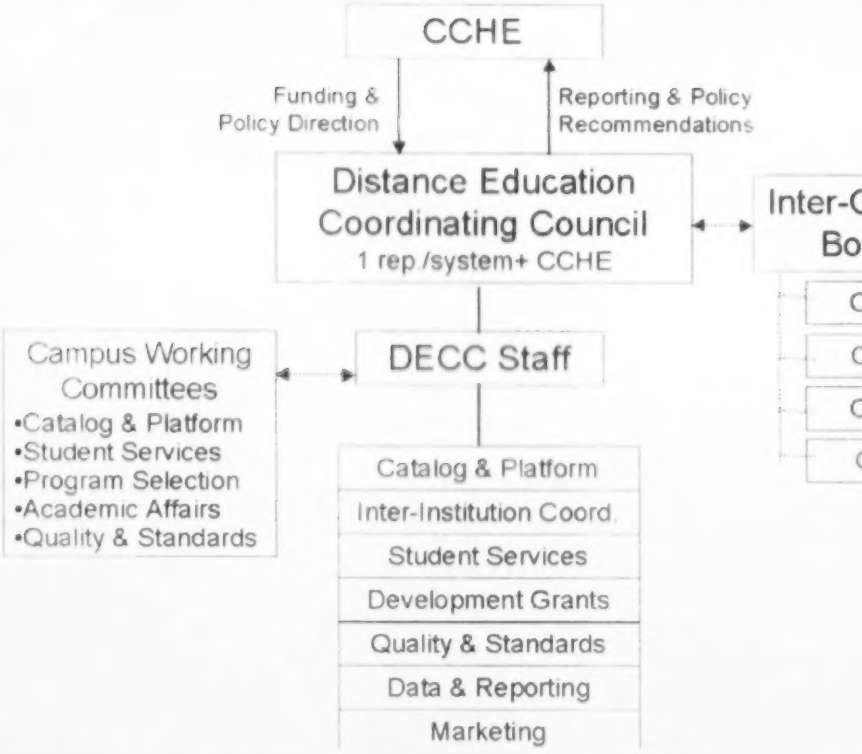
ing this, but student's would benefit)

ving rapidly now. Metropolitan State College of Denver's enrollment
found online enrollments grew (all institutions) by 39 percent from

ement for a distributed education coordinating function:

cost-effectiveness of certificate and degree programs offered via
ution through statewide coordination of resources and services to

ructure is one of a coordinating council, supported by staff responsible
tives from each governing board. It would integrate with the planning
s of its chief executive, financial, academic, and information councils. It
gh standing committees. The council would have a director and a small



Organizational structures examined and rejected, including reasons why, a

- A consortium with no staff. This is rejected because it is not practical accomplish the set of responsibilities set forth for it.
- An office within CCHE with an advisory board. This is rejected beca
- An entity. This is perceived to require too much organizational overh financial) to be practical for the scope of responsibilities envisioned.

Responsibilities of DECC

There is a consensus of the subcommittee that the responsibilities of the elements of a common platform, inter-institutional coordination on such student services such as a student ombudsman, managing any grants for p technical standards, and compiling annual data and reports.

ouncil
ard

EOs
FOs
AOs
IOs

re:

to expect a consortium with no dedicated human resources to

ıse this arrangement lacks the neutrality of the preferred arrangement.
ead (authorization, possible incorporation, facilities, personnel, and

DECC would include: managing a common course catalog and shared
hings as course credit transferability and articulation, the provision of
ogram development, establishing a shared set of quality assurance and

A more detailed list would include:

1. Catalog & Platform
   1.1. Catalog. May be in-sourced to an institution. Coordinate implen
   1.2. Platform. Draft and issue RFPs for State Awards for distributed services
2. Inter-Institutional Coordination
   2.1.1. Credit transfer and articulation
   2.1.2. Tuition payment, credit or transfer (when taking extra clas
3. Student Services
   3.1. Student advocate and ombudsperson
   3.2. Market analyses
4. Development Grants
   4.1. Establish funding criteria
      4.1.1. Required. The proposed program
         4.1.1.1. Constitutes an entire degree, certificate, or general ed
         4.1.1.2. Provides for faculty training and support
         4.1.1.3. Includes quality assurance and control mechanisms
         4.1.1.4. Presents reasonable and definite milestones, timeline
         4.1.1.5. Complies with adopted technical standards and syste
         4.1.1.6. Intellectual property goes to institution in accordance
      4.1.2. Preferred
         4.1.2.1. Fills a gap in existing program offerings from a state
         4.1.2.2. Eliminates or consolidates program duplication
         4.1.2.3. Addresses workforce needs of Colorado
         4.1.2.4. Addresses a sizeable student market
         4.1.2.5. Broadens access to rural populations
         4.1.2.6. Has multi-institutional participation (course develop
         4.1.2.7. Explores cost-effective uses of technology
         4.1.2.8. Explores innovative and appropriate uses of technol
         4.1.2.9. Showcases competitive academic competency to glo
         4.1.2.10. Enhances on-campus technology-enhanced delivery
         4.1.2.11. Involves 2-year to 4-year program articulation
   4.2 Solicit and award program development grants
      4.2.1. Contracting
      4.2.2. Contract monitoring

ıentation
education systems and

ses at other institutions)

ucation program

s, and deliverables
ms
with its own policy

wide perspective

ment and/or delivery)

gy
oal markets
of program

4.2.3. Acceptance of deliverables
5. Quality & Standards
   5.1. Training programs
   5.2. Support services
   5.3. Course development and delivery guidelines
   5.4. Course assessment guidelines
6. Data & Reporting
   6.1. Document distributed education activity in Colorado (from cou evaluation)
   6.2. Serve as information clearinghouse, respond to requests for su
   6.3. Prepare annual report to DECC, CCHE and Legislature
      6.3.1. Accomplishments
      6.3.2. Student access
      6.3.3. Program quality
      6.3.4. Cost-effectiveness
      6.3.5. Policy recommendations
      6.3.6. Resource requirements (financial, human, technological

Policy Recommendations

1. There should be a council formed, as described above.

Prioritized Funding Requirements

Initial 1.0 FTE funding of DECC staff through shared support from insti staffing through a CCHE decision item for FY03. Interim support of the D

Organizational Taskforce Participants

- Jeff Richardson, Chief Information Officer, CCHE (Chair)
- Donna Bottenberg, Director of Continuing Education, UNC
- Andrew Breckel, Director, Extended Studies, CCHE
- Dave Clark, Academic Vice President, CSU System
- Mike Martin, Associate Vice President, CU System
- Vicky Seehusen, Vice President for Distance Education, CCOC
- Derek Wilson, CIO, CSM

rses, to support, to

vey information .

)

utions given establishment of a central development fund. Subsequent
ECC through existing CCHE staff.

Introduction

From the CCHE distance education goals and strategies, the following
provided by Colorado public institutions of higher education:

- Who should bear the costs of distance education?
- What funding mechanisms encourage cost effectiveness?
- What funding mechanisms encourage quality and innovation in dist

Potential funding sources include:

Existing Institutional Funds – Traditional education is funded primarily
programs may subsidize higher cost programs. The model can be ex
mechanisms from existing resources.

Specific Student Charges -- Where the ramp-up and/or on-going costs
tuition rates or specific fees may be assessed. The potential also exists
actual costs are not higher.

New Dedicated State Funding -- New state funds (either General Fu
education. We have concerns with both fund sources. With General Fu
are concerned that any separate allocation of funds would result in a d
restrictions on the use of state Capital Construction funds would seemin

Other – Other funding sources include private gifts and contracts as we
successful in tapping into federal grant money to help develop online co

Cost Analyses

*Before evaluating who should pay the costs of distance education and h
more fundamental question needs to be addressed: What are the co*

*On one hand, there is general agreement that distance education is si
delivering existing content, not a fundamentally new creation. On th
significantly different tool with some unique characteristics that im*

FORCE REPORT

questions emerge relative to the financial aspects of distance education

ance education?

hrough student tuition/fees and state dollars. Under this model, low cost ended to distance education with each institution developing funding

of distance education are higher than for traditional courses, differential for these incremental charges to be made due to market demand, even if

d or Capital Construction) could be dedicated to supporting distance nd growth restricted by the six percent Arveschoug-Bird limitation, we rect reduction of General Fund campus support. Similarly the statutory gly limit the use of those dollars.

l as federally funded grants and contracts. Campuses have already been rses.

ow funding mechanisms can encourage cost effectiveness and quality, a sts of distance education? Unfortunately this is not easily answered.

nply a mode of instructional delivery, that is, a new tool to be used in e other hand, distance education, particularly online instruction, is a pact costs of instruction and make traditional cost analysis models

inadequate. For example:

- *In an online mode of communication, the faculty does not have the*
  feedback necessitates more assignments and exercises to adequatel

- *Teaching becomes more tutorial. Students have uninterrupted acce*
  classroom seven students may stay after for assistance; the faculty
  becomes seven separate responses online. Overall, faculty investme
  loads are not feasible where faculty loads are exclusively online.
- *Due to the additional attention received by students, class sizes mu*
  which exacerbates the financial situation caused by increased facu

- *Another cost of distance education is the cost to maintain system in*
  student transmits a contaminated paper the faculty must communic
  with a virus the institution bears the cost of cleaning the system.
- *Because distance education is new, compensation plans for course*
  costs, but as a development incentive. The plans vary significantly
  departments.
- *Identification of faculty costs is difficult. Many faculty teach both o*
  sometimes-special stipends are offered in addition or as an overloa
- *A final issue that is difficult to quantify is technological change. Th*
  newer technologies and the hardware/software requirements of co

- *Technology costs for development and delivery of online courses m*

As distance education evolves, so to will the means of accounting for a
comparison of online and traditional course costs:

benefit of eye contact, or body language. This absence of traditional
evaluate outcomes.

s to faculty and expect instantaneous responses. In the traditional
an answer the question(s), for all the students at one time. This
nt of time has increased for any given course and traditional teaching

t remain small. This reduces the average income per course section,
ty cost per student enrollment.

tegrity. An example of this is the transmission of term papers. If a
ute to the student there is a problem. If the faculty opens the term paper

development have been put in place, not necessarily related to value or
rom institution to institution and within colleges, schools and

nline and traditional courses as part of their assigned load, yet
d.
e rapidity of progress impacts both "restyling" of course content to use
rse developers and deliverers.

ay be decentralized and difficult to identify.

nd analyzing costs. In the meantime what can be shown is a generalized

	Online Courses	Traditiona
Content Development	Varies dramatically from being a requirement and/ or voluntary donation at no incremental cost to $5,000 per course. External grant funds are sometimes available.	Typically incrementa
Content Conversion for Distance Delivery	Incremental costs are estimated at $500 - $1,000. Actual costs are likely to be more if volunteered time is considered.	Not applic Miscellane considered
Instructional Delivery / Faculty	Varies significantly by institution and discipline. Reasonably consistent with funding of a traditional course counterpart.	Varies institution
Technology Infrastructure	Based on charges by outside vendors, the cost is between $900 and $2,400.	Although in traditio usage and significant
Technological Change	As distance education evolves, the cost of "restyling" course content frequently may be significant.	Traditiona impacted change, bu

A recent cost analysis for one program at the University of Colora courses ($12,401 vs. $12,846) but with significantly higher cost pe online SFTE vs. $4,055 per traditional SFTE). Due to the addi perpetuating the greater per SFTE cost. It is not yet clear if the ev delivery methods. In addition, there are some indications that in higher for online than for traditional.

Potential for Economies of Scale

l Courses

part of "load". No
l costs.

able.
ous materials costs
immaterial.

significantly by
and discipline.

echnology is used
al classrooms, the
costs vary
y.
courses are also
by technological
to a lesser degree.

lo – Denver (UCD) reflected similar costs for online and traditional tudent FTE for online courses due to smaller class sizes ($6,603 per ional attention required, course enrollment may remain smaller, olution of distance education will eventually allow for more efficient other programs and institutions even the costs per course may be

Part of UCD's cost analysis was a review of areas for economies of s
but this element is a small percentage of the total cost of online co
RFP was greater in total than the price break.

There are two types of price breaks:

1. Choose from a list of vendors with state approvals, or
2. The use of one required vendor.

Policy recommendations on this issue are included under the Comm

There are also other costs to be considered:

1. Conversion costs.
2. Cost of retraining faculty to be able to use the new platform.
3.
4. Cost of new versions and upgrades and who makes and enforce

Current Funding Mechanisms

Currently institutions are funding distance education through
opportunities and differentiated tuition and fees. The following
traditional courses at selected institutions.

Policy Recommendations

Student Tuition and Fee Rates

Each institution has a different role and mission as well as d
Therefore, to effectively deliver instruction, each campus varies in
structure that is very successful at one institution may

These institutional differences need to continue to be respected in
charge appropriate tuition and fees and set other policies (e.g., the
the manner that best meets the needs of the students they are servin

cale and associated savings. Lower costs were garnered in licensing, urses. A 10% price break was achieved, but the cost of issuing the

on Platform discussion in the next section.

s decisions to upgrade.

a combination of existing institutional resources, federal grant table (next page) compares the student charges for online and

ifferent environmental characteristics and student demographics. its tuition and fee rates and policies. A particular tuition and fee be impractical or counterproductive at another institution.

the alternative delivery of education. Campuses should be free to application of a "window" of credit hours for a flat tuition rate) in g

Table I: 2000-01 Tuition and Fee Comparison - Online vs Traditio

Full-Time Undergraduate and Graduates Tuition and Mandatory Fees at 12 Credit Hours

Type	Level	Institution	Resident		
			Tuition ($)	Fees ($)	Total T&F
Online	Undergraduate	UCD	$ 1,149.00	$ 458.00	$ 1,607.00
		MSCD	$ 883.80	$ 331.00	$ 1,214.80
		ACC	$ 1,416.00	$ 9.25	$ 1,425.25
		LCC	$ 1,416.00	$ 9.25	$ 1,425.25
		MCC	$ 1,416.00	$ 9.25	$ 1,425.25
		PPCC	$ 1,416.00	$ 9.25	$ 1,425.25
	Graduate	UCD	$ 1,579.00	$ 458.00	$ 2,037.00
Traditional	Undergraduate	UCD	$ 1,149.00	$ 400.40	$ 1,549.40
		MSCD	$ 883.80	$ 228.16	$ 1,111.96
		ACC	$ 693.00	$ 63.85	$ 756.85
		LCC	$ 693.00	$ 143.15	$ 836.15
		MCC	$ 693.00	$ 75.25	$ 768.25
		PPCC	$ 693.00	$ 60.25	$ 753.25
	Graduate	UCD	$ 1,579.00	$ 400.40	$ 1,979.40
Difference (Online minus Traditional)	Undergraduate	UCD	$ -	$ 57.60	$ 57.60
		MSCD	$ -	$ 102.84	$ 102.84
		ACC	$ 723.00	$ (54.60)	$ 668.40
		LCC	$ 723.00	$ (133.90)	$ 589.10
		MCC	$ 723.00	$ (66.00)	$ 657.00
		PPCC	$ 723.00	$ (51.00)	$ 672.00
	Graduate	UCD	$ -	$ 57.60	$ 57.60

Assumptions:

UCD -- This comparison assumes a student is taking ALL online courses. Students registering for only online courses pay a $100 per course fee, the Information Technology Fee and the Student Information System Fee. All other fees are waived.

MSCD -- This comparison assumes a student is taking ALL online courses. Students registering for only online courses pay a $23 per credit hour fee, the Information Technology Fee and the Student Registration Fee. All other fees are waived.

Community Colleges of Colorado -- This comparison assumes a student is taking ALL online courses. Students registering for only online courses pay the $9.25 registration fee and are subject to the course fee for designated high and medium cost courses. The course fee is not included in the fee amounts for both online and regular students because the fee amount is subject to the course mix taken by the student.

FTE Funding

The FTE Funding policy is a critical component for the successful d universities. Since the first online courses were offered in 1996 mos hours generated. CCHE sent out letters to campus officials instructi credit hours for state funding. Later, CCHE discontinued the deta ability to continue reporting them as state funded resident instructio

al Delivery
er Semester

Non-Resident		
Tuition ($)	Fees ($)	Total T&F
$ 5,821.00	$ 458.00	$ 6,279.0
$ 3,660.00	$ 331.00	$ 3,991.0
$ 1,416.00	$ 9.25	$ 1,425.2
$ 1,416.00	$ 9.25	$ 1,425.2
$ 1,416.00	$ 9.25	$ 1,425.2
$ 1,416.00	$ 9.25	$ 1,425.2
$ 6,371.00	$ 458.00	$ 6,829.0
$ 5,821.00	$ 400.40	$ 6,221.4
$ 3,660.00	$ 228.16	$ 3,888.1
$ 3,329.40	$ 63.85	$ 3,393.2
$ 2,663.40	$ 143.15	$ 2,806.5
$ 3,329.40	$ 75.25	$ 3,404.6
$ 3,329.40	$ 60.25	$ 3,389.6
$ 6,371.00	$ 400.40	$ 6,771.4
$ -	$ 57.60	$ 57.6
$ -	$ 102.84	$ 102.8
$ (1,913.40)	$ (54.60)	$ (1,968.0
$ (1,247.40)	$ (133.90)	$ (1,381.3
$ (1,913.40)	$ (66.00)	$ (1,979.4
$ (1,913.40)	$ (51.00)	$ (1,964.4
$ -	$ 57.60	$ 57.6

elivery of online courses for the majority of Colorado college's and t schools sought advice from the CCHE on reporting those credit ng them to furnish course specific information and then report the iled separate reporting, but allowed colleges and universities the courses.

CCHE needs to clarify the FTE reimbursement policy for distance e
compilation of CCHE policy modified by two separate letters from
their interpretations of these separate documents. In reviewing t
flexibility remains important. Remember, distance education is sim
learners in the same manner as they support resident classroom lear

Specifically, some campuses may best serve their students by put
funded" umbrella, where FTE reimbursement is not an issue. Howe
are best delivered within the "regular" academic structure - state fu
baccalaureate institutions' FTE delivered "off site"(with the excep
policy of counting all resident FTE in distance education courses.
made consistent if possible.

Content Development

One possibility under consideration is a competitive RFP process t
institutions. This would require a centralized funding pool, ost
parameters, "new" money may be illusory. Identified below are
development fund.

- One-time central appropriation
- Dedicated Student Fee
- Sharing of new revenue
- Premium state FTE funding

In addition, there are two financing mechanisms that institutions mi

- Premium state FTE funding
- Individual institutional flexibility

Centralized Funding

1. A one-time state appropriation (source to be determined) for ca

- Assuming a public policy interest in increasing distance educati
State. However, given the limitations on State funds, there is the

education courses. The current reimbursement policy seems to be a CCHE staff. It appears as though campuses may be inconsistent in he CCHE policy, it is important to note again that institutional ply a method of delivery; the State should support resident online ners.

ting all distance education under the continuing education/"cash ever, for the majority of campuses where some or all online courses nding is appropriate. In addition, the CCHE policy of not counting tion of certain approved programs) is inconsistent with the CCHE Certainly, these two policies should be reconsidered together and

o select and award funding for new online content development by tensibly from "new" money. However, given the state funding e four potential financing mechanisms for a centralized content

ght use if content development continued to be decentralized.

pitalizing a fund for competitive proposals from the institutions.

on courses, then it is appropriate that the funding come from the e very real possibility that any dedicated State appropriations may

effectively reduce the funds otherwise available to higher educa
cost of dedicated content development at the expense of unrestr
- Competitive proposals require institutional effort to prepare. T
otherwise be spent on content development. Evaluation of prop
- The proposal process adds a level of review to course content de

2. A dedicated student fee to build and/or maintain the fund for o

- Student fees place the cost burden directly on those who benefit
to have individuals who cannot afford the cost being beneficiari
- Competitive proposals require institutional effort to prepare. P
content development. Evaluation of proposals also requires per
- The proposal process adds a level of review to course content de

3. Sharing new revenues from enrollments in distance education c
revenues would build and/or maintain the central fund.

- If an institution uses "new revenues" (tuition/fees and State fun
of public funds and distance education student payments are su
the cost burden on the beneficiaries of distance education while
- Competitive proposals and calculation of surcharge require ins
that could otherwise be spent on content development and addi
proposals also requires personnel time at some overhead cost.
- The proposal process adds a level of review to course content de

4. A premium for FTE funding from the State for distance educat
directly to build and/or maintain the fund for on-going proposa

- Assuming a public policy interest in increasing distance educat
State. However, given the limitations on state funds, this will ef
is not clear that it is appropriate for the State to bear the cost o
funding for higher education.
- Competitive proposals require institutional effort to prepare. T
otherwise be spent on content development. Evaluation of prop

tion. It is not clear that it is appropriate for the State to bear the
icted funding for higher education.
he time spent on proposal preparation supplants time that could
osals also requires personnel time at some overhead cost.
velopment that could enhance the quality of distance education.

n-going proposals.

. The drawback is that in some cases it may be in the public interest
es of distance education.
roposal preparation supplants time that could otherwise be spent on
sonnel time at some overhead cost.
velopment that could enhance the quality of distance education.

ourses initiated with central development funds. A portion of these

ding) to finance a central content development fund, a combination
pporting distance education. The "student charges" portion places
the State funds subsidize the cost due to the public policy issues.
titutional effort to prepare. Proposal preparation supplants time
tional administrative burdens are an incremental cost. Evaluation of

velopment that could enhance the quality of distance education.

ion enrollments, e.g., 1.2 times the typical FTE, with .2 going
ls.

on courses, then it is appropriate that the funding come from the
fectively reduce the funds otherwise available to higher education. It
f dedicated content development at the expense of unrestricted

he time spent on proposal preparation supplants time that could
osals also requires personnel time at some overhead cost.

- The proposal process adds a level of review to course content de
  However, centralized evaluation standards can limit innovation

Decentralized Funding

5. No central competitive proposals, premium FTE paid by the sta

- Assuming a public policy interest in increasing distance educati
  State. However, given the limitations on state funds, this will eff
  is not clear that it is appropriate for the State to bear the cost of
  funding for higher education. This has an advantage over the co
  distance education FTE will be the beneficiaries of the State fun
- If content development funding remains at the institutional leve
  to prepare proposals. In addition the bureaucracy of proposal r
- If there are no centralized standards, content development can

  competitive marketplace created by the common catalog; if one
  access to course X elsewhere. In addition the "carrot" of premi

6. No central competitive proposals, development funded on an in

- If an institution uses existing dollars (tuition/fees and State fund
  students are effectively supporting distance education. This ma

  number one.
- If content development funding remains at the institutional leve
  to prepare proposals. In addition the bureaucracy of proposal r
- If there are no centralized standards, content development can

  competitive marketplace created by the common catalog; if one
  access to course X elsewhere.

In summary, we recommend against a central fund for content de
education delivery and there are significant concerns with the finan
fund is implemented, it should be done in such a way as to best ma
has no impact on campus general funds would be such a mecha
maintained, and then each institution should be able to

elopment that could enhance the quality of distance education.
ınd adaptation to specific needs at individual institutions.

e directly to the institutions for content development.

n courses, then it is appropriate that the funding come from the
ctively reduce the funds otherwise available to higher education. It
dedicated content development at the expense of unrestricted
ntralized approach in that the institution who generated the
ding.
, time is not diverted from instruction and/or content development
anagement and evaluation is avoided.
e more responsive to the unique needs of individual institutions

institution's course X is not of high quality, then students have easy
m FTE exerts upward pressure on quality.

dividual institution basis.

ling) to finance a central content development fund, on-campus
be of benefit to those whose schedule or situations are better

l, time is not diverted from instruction and/or content development
anagement and evaluation is avoided.
e more responsive to the unique needs of individual institutions

institution's course X is not of high quality, then students have easy

elopment. It is not clear that this would benefit the state's distance
ial impact to ongoing campus operations. In the event that a central
intain institutionally flexibility. A one-time state appropriation that
nism. If there is also an associated requirement that the fund be
determine how it should finance its proportional share.

The entire recommendation was not unanimously supported. A mino

- Incentives for institutions to use a common platform (courses de
- by Metro, UCD, CCOC instead of being done separately, in trip
- A means for exploring improvements in the cost-effectiveness of amortize costs, enrollments larger than any one institution could
- A means for targeting certain degree programs of importance to
- A means for assisting smaller institutions that lack discretionary
- Incentives for institutions to participate in a common registratio may be asked to participate in this), thus providing greater servi

Central Organization

If the governing boards CEOs support the concept of some type of council staffed by an individual who reports to the governing board who reports to the CFOs.

Common Catalog

There are some benefits to a common catalog, which in effect cre Market forces would put upward pressure on quality and downwa choices. This does not necessarily benefit individual institutions, bu borne by "new" state funding that does not negatively impact cam discussion, perhaps by the governing boards' distance education coo

Common Platform

We concur with the direction taken by the Common Platform taskf technologies and services that best meet their needs and spreads ri significant financial and reputational dangers with the selection o inherent instability of a growth area. A single vendor in essence, pla

Policy Issues

There are several policy issues that are significant to the distance

ity viewpoint included concerns with:

eloped with the fund may use this platform).

icate).
distance education (which may require large enrollments to
marshal).
the state (which individual institutions may not see as a priority).
resources to develop distance programs.
n and tuition payment system (programs developed with the fund
ce to the student.

statewide distance education coordinating body, we recommend a
s. This would be similar to the higher education fiscal coordinator

ates a competitive marketplace for Colorado distance education.
rd pressure on prices as students have access to a wide variety of
meets a public policy concern. The implementation costs could be
pus funding. The cost of ongoing operations is an issue for future
rdinating body.

orce, that is, that institutions continue to have flexibility to use the
sk in the mission-critical delivery of distance education. There are
f a single platform because this is an emerging industry with the
es all our eggs in one basket.

education discussion, but were not practical to explore within the

timeframe of this taskforce.

Enrollment Growth on Campuses

Will distance education enrollment growth cannibalize the "bricks
where there has been significant growth in distance education, the
education has been a substitute for traditional classroom educatio
important issue is the long-term impact of distance educatio

Financial Aid

There are two financial aid issues. The first is the feasibility and all
basis to a student taking courses from more than one Colorado inst
students taking courses at more than one Colorado institution.

1. How can students aggregate courses from different institutions
status? A student's budget and overall eligibility drop if their en
institution to be a "home institution" and count the other classe
hours for determining full-time status and in how they offer the
computer systems in order to support these consortium agreeme
2. A potential problem exists in double counting of credit hours at
to ensure appropriate counting. This process would benefit stud
colleges and universities to take these extraordinary steps to ha

Another long-term problem is that if an institution as a whole offer
federal financial aid. To retain there federal eligibility, institutions
it is a demonstration project (e.g., the Community Colleges Online P

Transferability of Credits

Another impediment to distance education is transferability of cou
incentive for course transferability in general, but the situation i
catalog. The potential exists to use funding mechanisms to encour
primarily an academic issue and funding mechanisms may be to
appropriate?

Premium State FTE Funding

and mortar" students currently on campuses? At some institutions total FTE has not substantially increased, suggesting that distance on, rather than a complement. Although it is too soon to say, an n on traditional campuses and building/facility requirements.

owability of offering state and federal financial aid on a cumulative itution. The second is avoiding abuse or misuse of financial aid by

o be able to meet the financial aid requirements of full-time student rollment drops below full-time status. It is possible for one s taken online at other institutions as part of the students' credit financial aid. This process requires modifications of the institutions nts.
multiple institutions. This requires additional administrative steps ents taking online courses, but there has been little incentive for ndle these situations.

s more than 50% of their courses online, they become ineligible for must get an exemption (e.g., Western Governors University) or that rogram).

rse credits to other institutions of higher education. There is little s exacerbated in distance education, particularly with a common age this. While transferability is clearly a desirable outcome, it is oo blunt of a tool for such a delicate issue. What incentives are

Premium state funding for distance education FTE (e.g., at 1.2 mechanism. This is possibly justifiable on the basis of higher costs varied in cost. Is there a substantial public policy reason for an a delivered courses for special consideration?

Summary

The financial advisory subcommittee has discussed a variety of education represents a different method of delivery for postsecond not necessarily a substitute, for classroom education. As a diffe challenges for institutions and state policy makers.

We believe campus representatives are best able to address the statewide communications, a statewide advisory council could be coordinate a needs assessment, and help develop the establishment

However, we do not believe the state would be well served with organization of this type would require a commitment of significa annual increase in the online course enrollments, why should the st in order to defray the development costs of additional online educa recently increased at an annual percentage rate of 39 percent, w responding to the demand of the consumers through offering impro

Financial Taskforce Participants

- Michelle Quinn, Budget Director, Interim Controller, UNC (C
- Ed Bowditch, Vice Chancellor for Administrative Affairs, CSU
- George Delaney, Vice President for Finance, CCofC
- Natalie Lutes, Budget Director, Metro State
- Dan Montez, Associate Director, Budget and Fiscal Planning, U
- Jeff Richardson, Chief Information Officer, CCHE

It should be noted that the majority viewpoint has been p recommendation.

References

times the normal rate) has been offered as a potential financing . However, different programs at any given institution have always across-the-board premium? Is it appropriate to single out distance

issues related to the state's online education efforts. While online ary education, we believe it serves as a critical complement, though rent method of delivery, distance education provides a variety of

se challenges. To assist the campus representatives and facilitate established to consider the state's online efforts. This council could of a statewide electronic course catalogue.

a centralized policy-making and grant making organization. Any nt state resources. If the state is already experiencing a significant ate's financial resources be funneled through a central organization tion? Given the fact that the state's distance education efforts have e believe this evidences that many of the institutions are already ved access.

air)
System

CD

resented and that not all committee members endorsed every

Tang, Michael. ***Evaluation of "University of Colorado at Denver on Controlling the Cost and Maintain the Quality of Online Edu*** 2000.

REPORT ON P
OF DISTANCE EDUCATION TEC

Introduction

This chapter addresses the issue of privatization with respect to the institutions in Colorado. It is provided in response to HB 99-1289 P increased use of privatization in obtaining and applying distance learnin

We examine six approaches to privatization, and for each, define what i applicability of the scenario to statewide implementation. At the end of privatization. The six scenarios are:

1. Form enterprise structures
2. Form hybrid enterprise/state-funded structure
3. Contract out program delivery
4. Contract out technology support
5. License distance education software
6. License content

Scenarios

1. Form enterprise structures

   What it is. This option segregates, statewide or by institution, di from residential instruction programs. This entity could be an en corporation. In all cases, the new entity would operate more as a would be free of such public sector constraints as purchasing, perso

   Example. Several of Colorado's current distance education prog enterprises. Notable examples include the extended studies progra

's Fund for the Improvement of Post Secondary (FIPSE) Grant
ation. http://cite.ecollege.com/papers/Tang.html. September 5,

RIVATIZATION
HNIQUES AND TECHNOLOGIES

operation of distance education programs by public higher education
art VI, Section XVII, which requires an "examination of potential for
g techniques and technologies by state institutions of higher education."

is, provide examples, look at arguments for and against, and discuss the
this chapter, we provide recommendations regarding distance education

stance programs into an entity organizationally distinct and independent
erprise (as defined by Colorado Revised Statutes) or non- or for-profit
business, with its funding coming from revenues. As a corporation, it
nnel, and pricing.

rams are operated by continuing education departments as institutional
ns at CSU and UCB.

Argument for. This structure is especially appropriate to continui certificates and degrees. For this population, there is a greater abil population has the maturity to learn at a distance. It has a great r coursework into an adult lifestyle. Finally, many of the programs an require State support to assure they are offered.

Argument against. Application of this approach to all distance educ violates two of our three guiding principles. It segregates distance e treating distance education as integral to the institution, differing or the institution, its role and mission and academic environment. Fur of technology, in violation of our second principle (to further the tec

In loosing public funding (as required by these options), the prog institutions are good at addressing markets that have substantial s degree programs in health care, education, and liberal arts, may go administration and information technology.

Applicability to statewide implementation. A statewide continuing high-demand, professional development programs of study is certai choose to collaborate and pool resources. Since these programs a collaboration. The Colorado Institute of Technology may serve as

2. Form hybrid enterprise/state-funded structure

What it is. In this scenario, an organization manages distance educ and teaching their students. The organization has no independent a participating institutions. The organization has no students of its o institutions. Students are "pooled" together as classes are filled. (T several of the participating institutions). The organization "borrows and either pays the faculty directly (as over-load adjunct stipend) requires that the participating institutions cross-list the organizatio numbering system. Because students register directly with the orga systems between the organization and its member institutions is req

Example. CCCOnline is the model for this scenario. Students ma co-list the CCCOnline courses as their own. Students, when they e site), specify their home college. Tuition and State FTE subsidy

ng education programs, where adult students are pursing professional
ity and willingness to pay market prices for educational services. This
eed for the "anytime anyplace" nature of distance education in fitting
d courses of interest to this population have sufficient market pull to not

ation programs (as opposed to specific, continuing education programs)
ducation activity from the mainstream activities of a campus. Instead of
ly in mode of delivery, it divorces the distance education program from
ther, it inhibits hybrid interaction between distance and on-campus use
hnology competencies of both faculty and students).

gram's ability to fulfill certain public needs is lost as well. For-profit
size. But many markets in the public interest to support, for example,
unserved while for-profits "cherry pick" lucrative markets in business

education program employing distance education techniques for certain
nly viable if those institutions who currently offer such programs would
re cash funded, the State has little sway in policy in promoting such
stimulus (programmatic and financial) for such statewide collaboration.

ation on behalf of a group of institutions using their academic structure
academic standing and the programs delivered are those offered by the
own, all the students are enrolled directly with one of the participating
hat is, a given course section will include a student cohort drawn from
s" faculty from its member institutions (to develop and deliver courses),
or pays the institution (to buy out a block of their time). This scenario
on's course list as their own, and therefore requires a common course
nization (to effect the cohorting), full articulation of student information
uired.

triculate in one of the participating community colleges. The colleges
nroll in one of these courses (through the CCCOnline registration Web
are paid to the home college. The home college keeps the State FTE

subsidy and approximately one-quarter of the tuition to defray the ex
transferred to CCCOnline where it is used to pay G&A, the student
or her institution).

Argument for. This model substantially integrates distance and on
from the campus. Further, it integrates distance education programs
collaborating on program development. This results in potential
course delivery, and (c) academic systems (registration, course platf

Argument against. In the case of CCCOnline, all the collaborating i
they share the same role and mission (being community colleges)
When this model is applied to several separate and independent in
governance and administrative structures, and different academic, st

Applicability to statewide implementation. Can CCCOnline be ext
applied, this model pools content and students and hence remove
Hence, its statewide applicability would be limited to those prog
common role and mission with respect to these programs.

3. Contract out program delivery

What it is. This option some, or all, program delivery is contracted o

Example. The Rural Education Access Program (REAP) of CCHE
colleges contract with four-year institutions to deliver certain bachel
criminal justice) are planned to be offered as distance education
Missouri and Kansas to offer them programs they cannot develop
probably most distance education enterprises in the country.

Argument for. This option makes a lot of sense when an institution
(for teachers, IT professionals, health care personnel, or prison perso

Argument against. When this strategy is applied to programs the i
programs by mode of delivery, and our first guiding principle is viol

Applicability to statewide implementation. Arguably, in a state the s
one of our institutions. This strategy appears most applicable on

penses of hosting the student. The remaining three-quarters of tuition is
s technology support service, and the faculty member (or reimburse his

campus academic programs by the use of faculty and students drawn
across institutions by pooling students into classes, sharing faculty, and
conomies of scale through centralized (a) program development, (b)
rm, quality assurance and control, program planning, etc.).

nstitutions (colleges) are organized under one governing board. Hence,
and administrative structure (both organizational and technological).
stitutions, difficulties arise with differing roles and missions, differing
dent, and financial information systems.

nded statewide? The argument against this has been presented. When
any distinctions due to role and mission and institutional branding.
rams and courses where several institutions would agree to share a

t to third party providers.

serves as a prototype of this model. Here, rural two-year community
r-level degree programs to their students. Some REAP programs (e.g.,
As another example, CCCOnline contracts with certain colleges in
themselves. The list of possible program vendors is large, including

needs to expand its program offerings to meet the needs of its market
nel) but lacks the resources to do so by itself.

nstitution does offer, however, this causes the artificial separation of
ted.

ze of Colorado, there is little educational content that is not offered by
n intrastate basis within Colorado, where courses are shared among

institutions, as exemplified by the REAP model.

4. Contract out technology support

What it is. This model is typical of current practice: a distance edu technology needed for the course. That technology and the course co technology provided usually bundles course management, course catalo Instructional design and development services are optionally available.

Example. Colorado institutions spent about $1.2 million in FY1998-99 expenditure, the bulk went to hosting courses (supporting the online cla to instructional design services.

Arguments for. The impetus for outsourcing to these vendors is to gai difficult to adequately provide these in-house. The most difficult servic also be a challenge to smaller institutions.

Arguments against.

1. These services, developed to serve the distant student, are not optim are now launching versions for use on campus. This difficulty in bri guiding principle (that educational services should be provided in a possible, it is preferable to develop technology solutions that span o
2. As services – rather than licensed product – pricing is largely based adopted a variety of tuition and fee mechanisms to cover these cost been extended to the regular classroom course, and, in fact, scaling Cumbersome, because of the overhead involved in setting up this t to begin experimenting with a course management system.
3. Customer service, reliability, and Internet access speeds have been student registration problems. In the past, the vendor networks hav commodity Internet, often many "hops" away from the campus, at t

Applicability to statewide implementation. The e-learning market is t today, tomorrow's choice of technology may differ. Also, in Colora investment in a number of vendor's systems. Thus, a statewide commitm prudent path to statewide implementation is to have master contracts collective purchasing power.

ation applications service provider (ASP) is engaged to provide the tent run on the ASP's computers, accessed through the Internet. The g, registration, tuition payment, library services, and 24 by 7 help desk.

n e-learning ASP services, principally with eCollege and Jones. Of this s interactions) for about 15,000 students. Only a small percentage went

access to a suite of services (as listed above) when institutions find it to provide is 24 by 7 help. But Internet access and server resources can

ized for the traditional classroom. This is changing, and many vendors dging the two environments (distant and on-campus) violates our first seamless environment regardless of mode of delivery). To the extent n-campus and at a distance modes of delivery.
per student served. For the distance education course, institutions have (a typical cost is $20 per student). But these mechanisms have not yet hem campus-wide may prove prohibitively expensive and cumbersome. pe of service for a regular classroom faculty member who may just want

roblems. Some institutions have had to struggle with the vendors with crashed, for as long as a few days. Finally, since the servers are on the mes response time has been less than adequate.

rbulent, as are most .com markets. While there are preferred vendors lo, with 1,700 existing online courses, we have a significant legacy ent to a single ASP must be viewed in light of these concerns. The most or the more popular vendors so that the institutions can exercise their

5. License distance education software

What it is. Many campuses, while they may outsource to e-learnin license a product rather than subscribing to a service. In so doin maintain these systems and integrate them with their own registrati

Example. Typical vendors include WebCT and Blackboard. The Blackboard.

Arguments for. These systems are inexpensive relative to e-learnin per-student basis, the cost is well under the $20 for outsourced institution's own servers, are under direct control. If students ar WAN). Content is securely under control of the originating instituti

Arguments against. These systems require significant capital and attractive). Total cost of ownership exceeds the cost of the license, to reproduce in-house is that of the 7 by 24 help desk. Due to thes than with an outsourced solution.

Applicability to statewide implementation. Market turbulence an statewide. However, as these products are and will be widely used through the award of master contracts.

6. License content

What it is. Many publishers are beginning to package and market online fully 40 percent of courses will use a mixture of in-house developed co the development of course content by licensing it from publishers.

Example. Content publishers include Pearson Education, McGraw Hill now. They have acquired several of the mainstream textbook publ copyrights, and exiting content. They are well poised to begin convertin

Arguments for. This will become a cost-effective and widespread prac will apply to online content. The quickest route to course content will b

g ASPs, also license course management software to run in-house. They g, the institutions incur the necessary expenses to install, operate, and on and financial systems.

community colleges use both; CSU uses WebCT; UCD and USC use

g ASP services. Campus-wide licenses run from $5,000 to $50,000; on a e-learning services. Further, the systems, running as they do on the on campus, the networking path to the servers is direct (the campus on.

human resources to run (which is why the e-learning services are so possibly by a considerable amount. The most expensive service element e constraints, the level of student service provided in-house may be less

d existing installed base both argue against adopting a single product by all institutions. Therefore, institutions should pool purchasing power

content just as they do textbooks. Gartner Group estimates that by 2005, ntent and purchased content. So, in this way, institutions will "privatize"

International Thompson. Pearson is the largest vendor of online content shers (Houghton Mifflin, Prentice Hall), and therefore their authors, g this legacy content into online formats.

ice. Most faculty specialize in teaching, not textbook writing. The same to license it from publishers.

Arguments against. It is as hard to argue against this as it is to argue aga
when using textbooks apply here as well. Curriculum responsibility res
content. Holes in matching the textbook coverage to the curriculum cov
member. The costs of published material will need to be covered, possib

Applicability to statewide implementation. The possibility of aggregatin
licensing opportunities

Policy Recommendations

1. Institutions should continue to support enterprise structures for cont
program and course content is substantially distinct and separate fro

   The CIT should be considered a collaborator in strengthening
   technology fields.

2. A pilot program should be established to explore how the hybrid en
under differing governing boards, on a voluntary basis, in certain ap

   The potential for privatization of management, development, delive
   to leave unexplored. This is especially true given the high cost st
   limited context of a single institution and program. It is recommen
   this approach that includes cooperation from multiple institutions fr

3. Institutions should be encouraged to form liaisons among themselve
local student market needs.

   The REAP program should be applauded for embracing distanc
   strengths. Since a distance education solution to paired institution
   great leverage of resources is accomplished in this way. When ne
   and/or commercial, for-profit institutions of higher education to ob
   within their own resources, and (b) such offerings are not readily av

4. The collective body of State institutions of higher education should
for (a) e-learning ASP services, (b) distance education software lice
specific tiered pricing structures rewarding higher volume with pric

ıst the use of textbooks. But the caveats and accommodations necessary
s with the institution. Textbooks must be selected that provide quality
erage need to be filled with auxiliary material assembled by the faculty
y by students just as textbook are.

g purchasing power applies here as well as to the other contracting and

inuing education, life-long learning markets for adult learners when the
m programs offered on campus.

ontinuing education distance education programs in the information

erprise/state-funded model may be extended to multiple institutions
plicable programs of study.

ry, and student service functions exemplified by this model is too great
ructure of distance education programs when offered within the more
ded that a significant grant of funds be provided toward a pilot study of
om differing governing boards.

s within Colorado to fill gaps in curricular offerings needed to address

e education as a means of augmenting local institutional curricular
l sharing makes the pairing available across all interested institutions,
essary, institutions should be encouraged to contract with out-of-state
tain program offerings to meet local needs when (a) they cannot do so
ilable from other State institutions.

form a buying cooperative and secure permissive master State awards
ses, and (c) licensed content, where the procurement awards include
discounts.

To the extent that a single vendor establishes a dominant position in
position as a State vendor, then these pricing structures will

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the marketplace and this, in turn, is reflected in their having a dominant provide an incentive for institutions to adopt a common platform.

ll taskforce for comment. Any comments received were incorporated.

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